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(Second)

ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

March, 1956



DOMINION BUREAU OF STATISTICS

Public Finance and Transportation Division
Transportation and Public Utilities Section



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March, 1956

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TABLE OF CONTENTS

Page

Introduction		1
Review of Su	rvey Results.	2
Definitions.		5
	Net Generating Capability within Canada, 1950 through 1959.	6
	Net Generating Capability within Provinces, 1950 through 1959.	7
	Net Capability and Firm Demand within Canada, 1950 through 1959.	9
	Net Capability and Firm Demand within Provinces, 1950 through 1959.	10
	Firm Energy Requirement within Canada, 1950 through 1959.	12
	Summary by Provinces and Canada, 1950 through 1959.	13
	Net Generating Capability within Provinces, 1950 through 1959.	25
	Firm Power Peak Load within Provinces, 1950 through 1959.	26
	Firm Energy Requirement within Provinces, 1950 through 1959.	27
Table V:	Indicated Reserve, 1950 through 1959.	28
Canadian Ele	ctrical Association Statistical Policy Committee.	31
Electric Pow	er Survey Committee.	32

Introduction

This report presents the results of the second annual electric power survey of capability and load which was conducted in March, 1956 by the Dominion Bureau of Statistics in co-operation with the Canadian Electrical Association. The 82 electric power producers covered by this survey include all major private and publicly - operated electric utilities and certain other power-producing companies, part of whose production is generally for sale to the public. These 82 electric power producers generated approximately 98% of the power for sale in Canada and approximately 90% of the total kilowatt hours produced in the country. The figures contained in this report can, therefore, be regarded as representative of the whole electric power industry in Canada. In some provinces, however, the percentage coverage is considerably lower than for the country as a whole.

The first survey covered only capability and firm power peak loads, but, for the second survey, producers were also asked to report annual firm energy requirements. The results are presented for Canada as a whole and for each individual province for the ten years 1950-1959.

Capability and load figures are based on the situation as it existed at the time of each company's annual firm power peak load. Throughout the report, the full amount of contractual commitments for firm power is reported.

Net generating capability, as shown in the tables, is the output of generating facilities after deducting station service. It is based on actual operating experience assuming all equipment available at the time of the annual firm power peak load with no deduction for equipment not operating at that time, and with no allowance made for the effect of unfavourable water and ice conditions. Net generating capability should not be construed as representing the total installed capacity of the facilities on the basis of name-plate ratings.

For the years 1950 to 1955, the net generating capability is shown for installations actually in existence during the month in which the firm power peak load occurred. For the years 1956 to 1959 it is forecast by adding new installations to the 1955 capability and deducting units retired.

The power situation in any province or for the country as a whole can be presented in several ways. Two of these are contained in the report and are based on the demand within the province (Table 1) and the demand on the province (Table V). In each case the appropriate capability is also shown. Demand within the province is related to net capability which means generating capability plus purchases outside the province less deliveries outside the province.

Presenting the power situation within Canada and within the individual provinces provides a measure of the growth of the industry within geographic areas and is of interest in measuring the contribution of the industry to the economic growth of the country as a whole. Demand on the province, however, is related to gross capability which is generating capability plus purchases outside the province and is of interest primarily from a utility point of view.

Some care must be exercised in the interpretation of these data. For example, the difference between gross capability and total firm demand is an indication of available reserves of power. Since power producers are not, however, all fully interconnected, reserves of power cannot always be completely utilized.

Review of Survey Results

Summary:

Net Generating Capability: The generating capability of Canada in 1955 amounted to 13,905 thousand kilowatts, an increase of 6.1 per cent over the 1954 total of 13,101 thousand kilowatts. The generating capability is expected to be 19,339 thousand kilowatts in 1959, an increase of 39.1 per cent over 1955. The proportion of thermal generation to the total is expected to rise from 12.6 per cent in 1955 to 15.4 per cent in 1959.

Firm Power Peak Load: The firm power peak load or demand within Canada amounted to 12,291 thousand kilowatts in 1955, an increase of 10.5 per cent over the 1954 total of 11,125 thousand kilowatts. By 1959 the load is forecast to rise 39 per cent to 17,086 thousand kilowatts.

Indicated Reserve: The indicated reserve in Canada in 1955 was 1,486 thousand kilowatts and is expected to be 2,197 thousand kilowatts in 1959.

Firm Energy Requirement: The indicated firm energy requirement in Canada was 72,633 million kilowatt hours in 1955, an increase of 10.1 per cent over the 1954 total of 65,978 million kilowatt hours. It is expected to climb to 101,-508 million kilowatt hours in 1959 or by 39.8 per cent.

Table 1 - Summary (Pages 13 to 24): This table presents the information which was collected from each of the 82 producers of power included in the survey, summarized for each of the provinces and for Canada. It shows the capability, firm power peak load, indicated reserve, and, for the first time, firm energy requirements.

Table II - Net Generating Capability Within Provinces (Page 25): The growth in net generating capability as illustrated in Table II is quite impressive. During the four-year period 1951-1955 the growth for Canada as a whole amounted to 4 million kilowatts or 40.9 per cent over the 1951 total. The indicated

growth of 39.1 per cent during the forecast period 1955 to 1959 represents an additional 5.4 million kilowatts of net generating capability. The total growth, both actual and planned over the period 1951 to 1959, is 96 per cent.

Although the forecast of net generating capability for Canada as a whole shows an increase of 96 per cent for the period 1951 to 1959, it varies considerably for the several provinces from a low of 31.8 per cent for Newfoundland to 204.8 per cent for British Columbia.

Table III - Firm Power Peak Load within Provinces (Page 26): During the period 1951 to 1959 the firm power peak load or demand within Canada is expected to increase by 8 million kilowatts or 87.9 per cent.

Whereas the actual increase in firm power peak demand experienced during the period 1951 to 1955 amounted to 3.2 million kilowatts or 35.2 per cent over the 1951 total, that forecast for the next four years amounts to 4.8 millions or 39 per cent over the 1955 total.

The increase, 1951-1959, for Canada as a whole, reflects a fairly steady and consistent growth from the 9 million kilowatts in 1951 to 17.1 million forecast for 1959. The actual growth experienced in the past four years, 1951 to 1955, amounted to a rate of 7.9 per cent per annum. The increase, forecast for the next four years 1955-1959 inclusive, is equal to a rate of growth of 8.6 per cent per annum.

Table IV - Firm Energy Requirement within Provinces (Page 27): Kilowatt hours needed to meet the firm energy requirement within the country totalled 72,633 million in 1955, an increase of 18,044 million kilowatt hours or 33.1 per cent over the 1951 total of 54,589 million. During the period 1955 to 1959, the firm energy requirement is expected to rise substantially each year to a total of 101,508 million kilowatt hours in 1959, or by 39.8 per cent. By 1959, the energy requirements are forecast to be almost double those in 1951.

<u>Table V - Indicated Reserve (Page 28)</u>: The electric utility industry must provide sufficient power to meet demand and to provide for contingencies.

Gross capability for any province may be defined as consisting of net generating capability (hydro plus thermal) plus purchases of firm power under firm obligation from utilities outside the province. Total demand for any province consists of firm power peak load within the province, plus any indicated shortage or rejected load as well as deliveries of firm power to utilities outside the province. In Table V, gross capability is related to total firm demand on the provinces and on Canada. The difference or indicated reserve, expressed as a percentage of total firm demand, shows to what extent productive resources have been able to keep pace with total firm demand in this rapidly growing industry.

For the three years 1951, 1955 and 1959, the indicated reserves in Canada were 621, 1,486 and 2,197 thousand kilowatts, which correspond to reserves of 6.7, 11.9 and 12.8 per cent, respectively, over the total demand in those years. Figures for the various provinces and Canada vary considerably from year to year and are shown in detail in this table.

<u>Charts</u>: On pages 6 to 12, five charts are presented to show results of the survey of the electric power industry in Canada in graphic form.

Chart A - Net Generating Capability within Canada (Page 6): This chart portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important. Total thermal generation has increased from 877 thousand kilowatts or 8.9 per cent of the net generating capability within Canada in 1951 to 2,981 thousand kilowatts or 15.4 per cent forecast for 1959.

<u>Chart B - Net Generating Capability within Provinces (Pages 7-8):</u> This chart presents for each of the provinces, the information contained in Chart A. It illustrates the comparative importance of thermal and hydro generation within provinces.

Chart C - Net Capability and Firm Demand within Canada (Page 9): Chart C provides an indication of the reserves available to meet firm demand for electric power within Canada.

Chart D - Net Capability and Firm Demand within Provinces (Pages 10-11): The fourth chart provides a graphic indication of the year to year ability of each of the provinces to meet its firm demand for electric power.

Chart E - Firm Energy Requirement within Canada (Page 12): This is an illustration of the growth in Canadian firm energy requirements by years for the period 1950 to 1959.

DEFINITIONS

NET GENERATING CAPABILITY

The maximum net kilowatt output (after station service) available from the generating facilities of the UTILITY or SYSTEM with all equipment available, at the time of the annual FIRM POWER PEAK LOAD, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

FIRM POWER

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

FIRM OBLIGATIONS

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis.

NET CAPABILITY

The sum of net generating capability and purchases of firm power under firm obligation less deliveries of firm power under firm obligation.

FIRM POWER PEAK LOAD

The annual FIRM POWER maximum average net kilowatt load of one hour duration within the UTILITY or SYSTEM.

INDICATED DEMAND

The sum of firm power peak load and indicated shortage.

INDICATED RESERVE

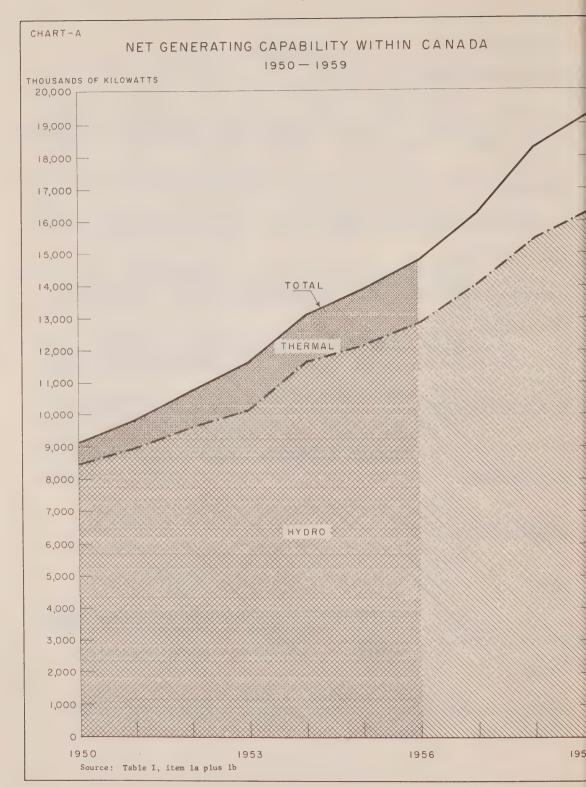
Net capability less indicated demand (+ or -).

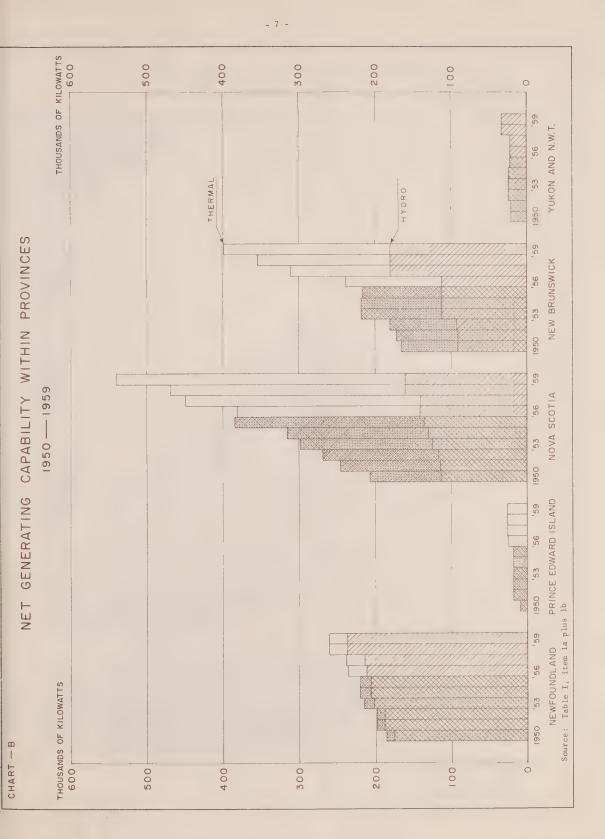
SYSTEM

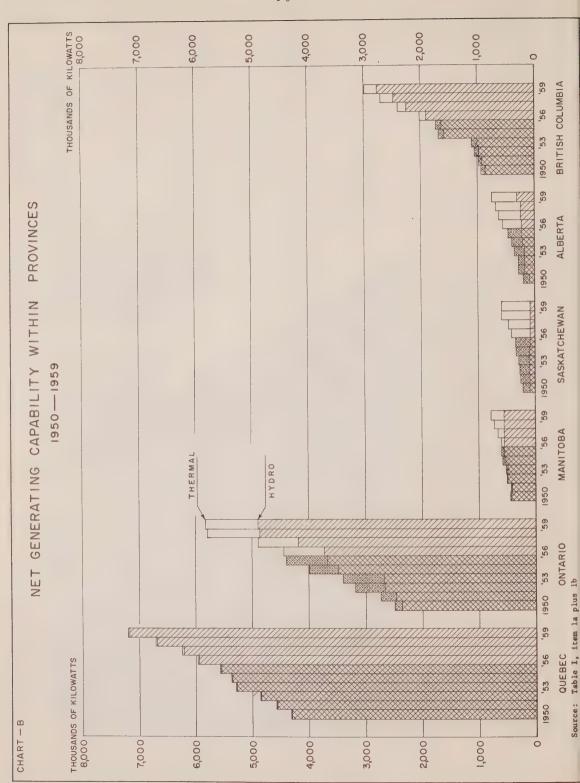
Two or more UTILITIES, having interconnections for the exchange of power, which although they may be separately incorporated, are controlled, managed or operated by one principal UTILITY.

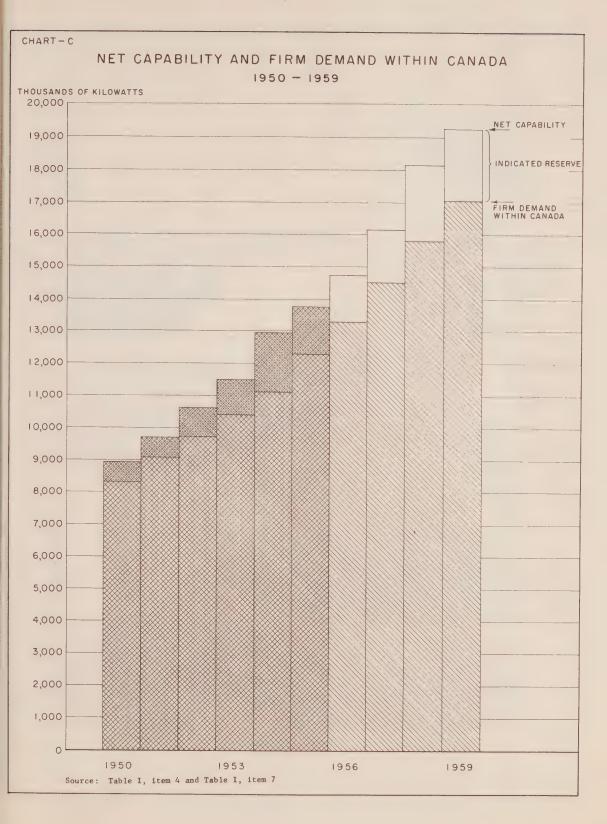
UTILITY

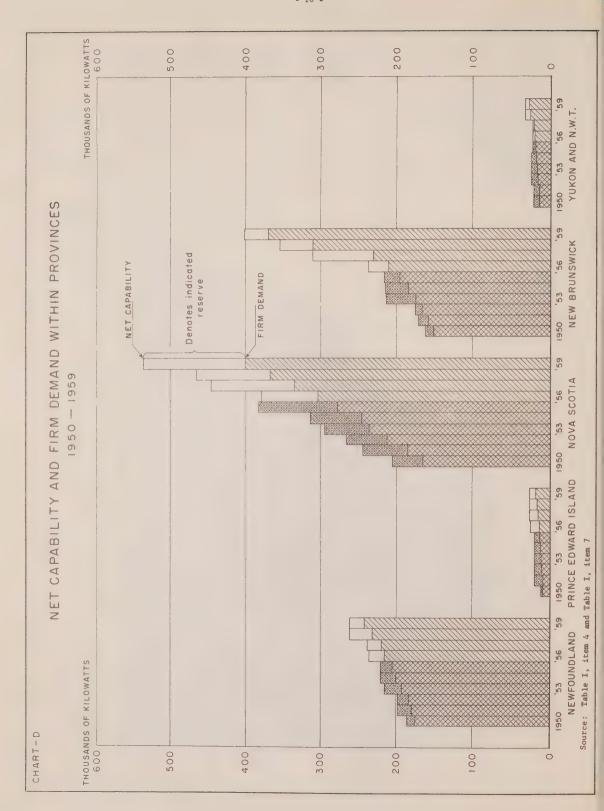
The COMPANY, COMMISSION, or UTILITY reporting or included in a SYSTEM report under Section III (which generates at least part of its own power).

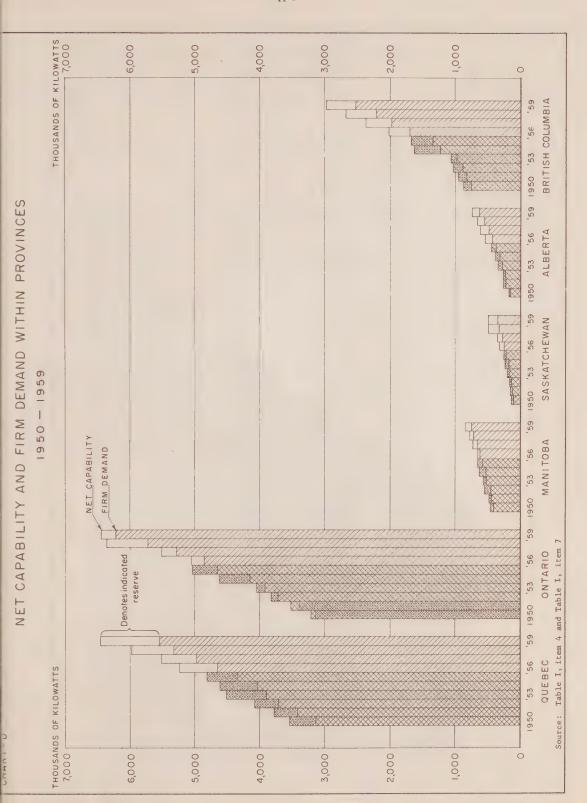


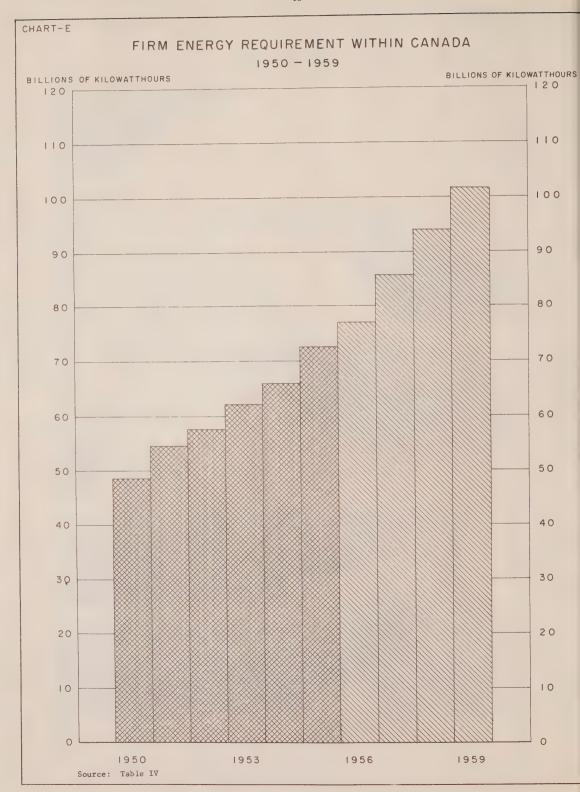












SUMMARY - NEWFOUNDLAND

TABLE I

Thousands of Kilowatts		
Thousands of Kil	owatts	
Thousands of Ki	-1	
Thousands of	N	
Thousands	of.	
	Thousands	

								FOREC	E S A	
	1950	1951	1952	1953	1954	1955				
							1956	1957	1958	1959
CAPABILITY:										
1. Net Generating Capability:										
(a) Hydro (b) Thermal	176 10	1 88 10	188 10	202	207	207	212 24	214 24	237	237
 Purchases of Firm Power under firm obligation from other utilities: 										
(a) In other Provinces (b) Outside Canada	1 1	1 1	1 1	1 1	1 1	i i	1 1	1 1	1 1	1 1
 Deliveries of Firm Power to other utilities; 										
(a) In other Provinces (b) Outside Canada	1 1	1 1	1 1		1 1		1 1	1 1	1 1	1 - 4
4. Net Capability (1 + 2 - 3)	186	198	198	215	221	221	236	238	261	261
				ACTUAL				FOREC	AST	
FIRM POWER PEAK LOAD:										
5. Within Province	175	180	184	193	199	204	216	220	232	242
6. Indicated Shortage or Rejection	ŝ	1	1	-	1	1	XXX	xxx	XXX	XXX
7. Indicated Demand within Province	175	180	184	193	200	205	216	220	232	242
INDICATED RESERVE:										
8. Difference (4 - 7)	+ 11	+ 18	+ 14	+ 22	+ 21	+ 16	+ 20	+ 18	+ 29	+ 19
			I M	LLIONS	OF K	ILOWATTH	OURS			
FIRM ENERGY REQUIREMENT: 9. Firm Energy Requirement within Province	1,050	1,031	1,147	1,180	1,213	1,277	1,330	1,332	1,425	1,467
10. Indicated Shortage or Rejection	1	1	1	1	6	10	XXX	XXX	XXX	жжж
 Indicated Firm Energy Requirement within Province (9 + 10) 	1,050	1,031	1,147	1,180	1,222	1,287	1,330	1,332	1,425	1,467
12 Deliveries of Firm Energy to other utilities;										
(a) In other Provinces (b) Outside Canada	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
(c) Total (a + b)	t	ŧ	t	1	1	1	ı	3	1	
13. Firm Energy Requirement on the Province (11 + 12)	1,050	1,031	1,147	1,180	1,222	1,287	1,330	1,332	1,425	1,467

SUMMARY - PRINCE EDWARD ISLAND

Thousands of Kilowatts

CAPABILITY:

firm es: 10 18 10 18 non 8 8 8 8 10 18 non + 2 + 10 10 31 31 34 con 31 34	1952 8 18 18 8 18 A C T U V	1953 1954	. 1955	1956	1957	1958 1	1959
Generating Capability Hydro Thermal In other Provinces Outside Canada veries of Firm Power to r utilities: In other Provinces Outside Canada Capability (1 + 2 - 3) In Province (2 + 6) In Frece (4 - 7) Exerce (4 - 7) In Energy Requirement within In Energy Requirement within In Energy Requirement Icated Shortage or Rejection In Energy Requirement within In Energy Requirement within Icated Shortage or Rejection In Energy Requirement within In Energy Requirement within In Energy Requirement within Icated Shortage or Rejection In Energy Requirement within In Energy Requirement within In Energy Requirement within In Energy Requirement within In Province (9 + 10)	18						
Generating Capability Thermal Hydro Thermal Hydro Thermal Hydro Thermal Hydro Thermal Bation ther utilities: The other Provinces Trutilities: The other Provinces Outside Canada Veries of Firm Power to Trutilities: The other Provinces The other Provinces The other Provinces The other Provinces The other Province of Firm Power to Trutilities: The other Province of Firm Power to Trutilities: The other Province of Firm Province The other Province of Firm Province of Firm Province of Cated Demand within Province Trutilities: The other Province of Firm Province of Trutilities The other Province of Firm Energy Requirement within The other Province (4 - 7) The other Province of Firm Energy Requirement of Trutilities The other Province of Firm Energy Province of Trutilities The other Province of Firm Energy Province of Trut	18 A C T U A						
ing Capability [Firm Power under firm from other utilities: [Firm Power under firm from other utilities: [Canada of Firm Power to [Canada of Firm Power to [Canada	18 18 18 18 A C T U A						
Firm Power under firm From other utilities: From other utilities: Frowinces Canada	18			٢	1	1	,
Frim Power under firm from other utilities:		1.1	18 18	25	26	26	26
Canada Carada Carada Carada Lies: Canada Ity (1 + 2 - 3) Ity (4 - 7) Requirement within 31 31 31 31 31 31 31 31 31 31	18 18 A C T U A	1 1			,	,	1
AD: Consider to Consider	18 A C T U A		1 1	1 1	. 1		1
Tr Provinces -	- 18 ACTUA				1	,	,
1	18 A C T U A		1 1		1	1	1 0
AD: ince hortage or Rejection emand within Province (5 + 6) (4 - 7) Requirement within 31 3 33 3 Shortage or Rejection - + 2 + 11 - + 2 + 11 3 + 11 4 + 11	CIUA	18	18 18	25	26	7.6	97
### function		L		Σī	ORECA	S T	
hortage or Rejection			6	, r	71	15	18
hortage or Rejection emand within Province (5 + 6) (4 - 7) (4 - 7) **Requirement within 31 3 Shortage or Rejection	6	10	71 11	xxx	XXX	XXX	ххх
(5 + 6) (4 - 7) (4 - 7) (5 + 6) (5 + 6) (6 - 7) (7 - 7) (8 - 7) (9 - 10) (1 - 7) (1 - 7) (1 - 7) (2 - 7) (3 - 7) (4 - 7) (4 - 7) (5 - 6) (6 - 7) (7 - 7) (7 - 7) (7 - 7) (8 - 10) (9 - 10) (1 - 7) (1 - 7) (1 - 7) (2 - 7) (3 - 7) (4 - 7) (5 - 7) (6 - 7) (7 - 7) (7 - 7) (8 - 7) (9 - 7) (9 - 7) (1 - 7) (1 - 7) (1 - 7) (2 - 7) (3 - 7) (4 - 7) (5 - 7) (6 - 7) (7 - 7) (7 - 7) (8 - 7) (9 - 7) (9 - 7) (9 - 7) (1 - 7) (1 - 7) (1 - 7) (2 - 7) (3 - 7) (4 - 7) (5 - 7) (6 - 7) (7 - 7) (7 - 7) (8 - 7) (9 - 7)	, 0		11 12	13	14	15	18
(4 - 7) + 2 + 1 EMENT: Requirement within 31 31 3 Shortage or Rejection							
rement within 31 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	10 + 9	*	7 + 6	+ 12	+ 12	+ 11	8.
rement within 31 3 e or Rejection	MILLI	ONS OF	KILOWATTHO	URS			
Firm Energy Requirement within 31 Province Indicated Shortage or Rejection Indicated Firm Energy Requirement 31 within Province (9 + 10)					;	ţ	F
Indicated Shortage or Rejection Indicated Firm Energy Requirement 31 31 4thin Province (9 + 10)	34 37	41	46 51	26 xxx	b 3 xxx	0/xxx	xxx
Indicated Firm Energy Requirement 31 Within Province (9 + 10)	5	1		22	63	7.0	77
	34 37	41	46 51	PC			
12. Deliveries of Firm Energy to other utilities:					1	ı	*
(a) In other Provinces (b) Outside Canada	r 1		1	ı	1	1	
(c) Total (a + b)	1			8	1		
13. Firm Energy Requirement on the 31 34	34 37	41	46 51	999	63	70	7.7

TABLE I

SUMMARY - NOVA SCOTIA

Thousands of Kilowatts

CAPABILITY:

								FOREC	AST		ı
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	ı
AP AB IL, ITY:											
1. Net Generating Capability:										;	
(a) Hydro (b) Thermal	113	114	117	124 174	130 186	136 248	141 240	141 308	161 308	379	
 Purchases of Pirm Power under firm obligation from other utilities: 											
(a) In other Provinces (b) Outside Canada	1 1	6 h	1 1		1 1	1 1	()	+ I	1 1		
 Deliveries of Firm Power to other utilities: 											
(a) In other Provinces (b) Outside Canada	21	- 5	1 5	1 5	81	- 2	- 2	- 2	1 5	m 1	ı
4. Net Capability (1 + 2 - 3)	205	244	267	296	314	382	379	447	467	537	- 1
				ACTUAL				FOREC	AST		.5 -
FIRM POWER PEAK LOAD:											
5. Within Province	161	183	211	233	243	278	304	336	368	004	
6. Indicated Shortage or Rejection	4	2	2	4	6	1	ххх	XXX	XXX	XXX	1
7. Indicated Demand Within Province	165	185	213	237	246	278	304	336	368	400	li
INDICATED RESERVE:											
8. Difference (4 - 7)	07 +	+ 59	+ 54	+ 59	+ 68	+ 104	+ 75	+ 111	66 +	+ 137	II
			HII	LLIONS	OF KI	LOWATTHO	URS				1
FIRM ENERGY REQUIREMENT:											
9. Firm Energy Requirement within Province	881	1,017	1,112	1,201	1,267	1,347	1,463	1,593	1,715	1,847	
10. Indicated Shortage or Rejection	1	ŧ	,	1	1	1	ххх	XXX	XXX	XXX	1
 Indicated Firm Energy Requirement within Province (9 + 10) 	881	1,017	1,112	1,201	1,267	1,347	1,463	1,593	1,715	1,847	1
12. Dellueries of Firm Energy to other utilities:											
(a) In other Provinces (b) Outside Canada	9 1	91	. 7	7	7	ω :	∞ 1	6 1	10	= '	1
(c) Total (a + b)	9	9	7	7	7	80	00	6	10	11	H
13. Firm Energy Requirement on the Province $(11 + 12)$	887	1,023	1,119	1,208	1,274	1,355	1,471	1,602	1,725	1,858	il

SUMMARY - NEW BRUNSWICK Thousands of Kilowatts

								PORRC	TSA	
									,	
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
CAPABILITY:										
1. Net Generating Capability:		(ć	119	112	112	112	180	180	180
(a) Hydro	90	8 28	888	106	106	105	126	131	174	218
2 Purchases of Firm Power under firm										
				(c	<	L ^r	2	١O	7
(a) In other Provinces	2	2	2	7 1	7 1	- 1) I		1	•
(b) Outside Canada	1	(1	ı						
3. Deliveries of Firm Power to										
other utilities:			1	1	,	ı	.1	1	1 -	1 ~
(a) In other Provinces	1 50	1 7	7	9	ıΩ	5	2	ur,	4	7
	163	170	175	214	215	216	238	311	355	401
4. Net capaniire (1			×	CTUAL				FOREC	AST	
FIRM POWER PEAK LOAD:	:	0 1	167	175	184	196	211	231	311	37.1
5. Within Province	151	158	707	CIT	- I	H	XXX	XXX	XXX	XXX
6. Indicated Shortage or Rejection		1	•							110
7. Indicated Demand within Province	151	158	167	175	184	197	211	231	311	3/1
(9 + 9)										
INDICATED RESERVE:	+ 12	+ 12	*	+ 39	+ 31	+ 19	+ 27	+ 80	+ 444	+ 30
8. Direrence (+ - /)	H		I I W	T. T. T. O.N. S.	OF KI	LOWATTHO	URS			
			4							
FIRM ENERGY REQUIREMENT:									1	000
 Firm Energy Requirement within Province 	828	886	883	901	1,043	1,021	1,098	1, 192 xxx	1,658 xxx	7,090 xxx
10. Indicated Shortage or Rejection	1	ı	4	•	1	•				000
	828	886	883	901	1,043	1,021	1,098	1,192	1,658	7,090
12. Deliveries of Firm Energy to										
other utilities:		,	,	•	•	ı	1	1 6	1 0	10
(a) In other Provinces	41	41	33	36	59	33	04	07	04	04
(c) Total (a + b)	41	41	33	36	59	33	07	04	040	0,1
13. Firm Energy Requirement on the	070	497	916	937	1,102	1,054	1,138	1,232	1,698	2,130
Province (11 + 12)	600	176								

- 17 -

SUMMARY - QUEBEC TABLE I

Thousands of Kilowatts

								FOREC	AST	
	1950	1951	1952	1953	19.04	1955	1956	1957	1958	1959
CAPABILITY:										
 Net Generating Capability: (a) Hydro 	4,295	4,554	4,844	5,268	5,346	5,548	5,940	6,207	6,689	7,174
(b) Thermal	6	6	11	11	12	13	13	15	15	15
 Purchases of Firm Power under firm obligation from other utilities: 										
(a) In other Provinces (b) Outside Canada	el 1	el 1	н ,	rd 2	1 4	1 15	н I	н .		ed i
 Deliveries of Firm Power to other utilities: 										
(a) In other Provinces (b) Outside Canada	711 56	713 56	713	713	694 56	969	656	656 56	56	657
4. Net Capability (1 + 2 - 3)	3,538	3,795	4,087	4,511	4,613	4,815	5,242	5,511	5,993	6,477
			A C	TUAL				FOREC	AST	
FIRM POWER PEAK LOAD:										
5. Within Province	3,123	3,412	3,702	3,895	4,037	4,309	4,651	4,981	5,338	5,550
6. Indicated Shortage or Rejection	•	1	•	4	•	777	XXX	XXX	XXX	жж
7. Indicated Demand within Province (5 + 6)	3,123	3,412	3,702	3,899	4,037	4,353	4,651	4,981	5,338	5,550
INDICATED RESERVE:										
8. Difference (4 - 7)	+ 415	+ 383	+ 385	+ 612	+ 576	+ 462	+ 591	+ 530	+ 655	+ 927
			I W	LLIONS	OFK	ILOWATTHO	URS			
FIRM ENERGY REQUIREMENT:										
9. Firm Energy Requirement within Province	20,155	22,905	24,197	26,439	27,676	29,196	29,527	32,665	35,144	36,725
10. Indicated Shortage or Rejection	123	215	37	1	I	362	ххх	XXX	XXX	XXX
11. Indicated Firm Energy Requirement within Province (9 + 10)	20,278	23,120	24,234	26,440	27,677	29,558	29,527	32,665	35,144	36,725
12. Deliveries of Firm Energy to other utilities:										
(a) In other Provinces (b) Outside Canada	4,287	4,288	4,304	4,272	4,155	6,049	3,949	4,019	4,026	4,028
(c) Total (a + b)	5,107	5,122	5,125	5,097	5,003	4,539	4,449	4,519	4,526	4,528
 Firm Energy Requirement on the Province (11 + 12) 	25,385	28,242	29,359	31,537	32,680	34,097	33,976	37,184	39,670	41,253
	The state of the s		The same of the sa			Control of the Contro	The second secon		The state of the s	

TABLE I

SUMMARY - ONTARIO
Thousands of Kilowatts

								FOREC	A S T	
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
CAPABILITY:						and survey and the survey of t				
1. Net Generating Capability: (a) Hydro (b) Thomas	2,349	2,458	2,654	2,666	3,463	3,669	3,724	4,176	4,855	4,888
 Purchases of Firm Power under firm obligation from other utilities: 						į				
(a) In other Provinces (b) Outside Canada	720	722 22	722 23	722 24	707	708	1 667	567	653	653
 Deliveries of Firm Power to other utilities: 										
(a) In other Provinces (b) Outside Canada	1 85	85	1 85	85	1 50	85	85	85	1 85	40
4. Net Capability (1 + 2 - 3)	3,131	3,392	. 3,831	4,052	4,633	5,041	5,053	5,506	6,389	6,472
			A	CIUAL				FOREC	AST	
FIRM POWER PEAK LOAD:										
5. Within Province	2,988	3,202	3,713	3,868	4,160	4,655	4,884	5,297	5,726	6,231
6. Indicated Shortage or Rejection	213	319	1	09	1	18	ххх	XXX	XXX	XXX
7. Indicated Demand within Province (5 + 6)	3,201	3,521	3,714	3,928	4,160	4,673	4,884	5,297	5,726	6,231
INDICATED RESERVE:										
8. Difference (4 - 7)	- 70	- 129	+ 117	+ 124	+ 473	+ 368	+ 169	+ 209	+ 663	+ 241
			I W	LLIONS	OFK	ILOWATTHO	URS			
FIRM ENERGY REQUIREMENT:										
	17,274	19,681	20,916	22,211	23,184	25,589	27,240	29,614	32,102	34,860
	255	97	6	2	1	9	xxx	XXX	XXX	XXX
 Indicated Firm Energy Requirement within Province (9 + 10) 	17,529	19,778	20,925	22,213	23,185	25,595	27,240	29,614	32,102	34,860
12. Deliveries of Firm Energy to other utilities:										
(a) In other Provinces (b) Outside Canada	703	703	990	999	3 624	3 687	690	4 689	689	4 502
(c) Total (a + b)	705	706	693	671	627	069	969	693	693	506
13. Firm Energy Requirement on the Province (11 + 12)	18,234	20,484	21,618	22,884	23,812	26,285	27,934	30,307	32,795	35,366
					The second secon					

ABLE 1

SUMMARY - MANITOBA

Thousands of Kilowatts

						i L		FOREC	AST	
, , ,	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
CAPABILITY:										
 Net Generating Capability: (a) Hvdro 	418	413	487	487	522	547	547	547	547	547
(b) Thermal	10	10	10	23	94	949	97	106	166	226
 Purchases of Firm Power under firm obligation from other utilities: 										
(a) In other Provinces (b) Outside Canada	89 1	77	79	79	80	79	80	80	80	80
3. Deliveries of Firm Power to other utilities:										
(a) In other Provinces (b) Outside Canada	6	Q) I	σ I	O 1	13	14	14	14	1 1	t 1
4. Net Capability (1 + 2 - 3)	487	167	267	580	635	658	629	719	793	853
			A C	TUAL				FOREC	AST	
FIRM POWER PEAK-LOAD:										
5. Within Province	419	454	094	512	533	594	629	663	708	740
6. Indicated Shortage or Rejection	5	1	1	t	1		ххх	XXX	XXX	XXX
7. Indicated Demand within Province (5 + 6)	419	454	460	512	533	594	629	663	708	740
INDICATED RESERVE:										
8. Difference (4 - 7)	+ 68	+ 37	+ 107	+ 68	+ 102	+ 64	+ 30	+ 56	+ 85	+ 113
			M	ILLIONS	OF	KILOWATTH	OURS			
FIRM ENERGY REQUIREMENT:										
9. Firm Energy Requirement within Province	2,216	2,427	2,526	2,670	2,852	3,086	3,271	3,471	3,681	4,021
10. Indicated Shortage or Rejection	•		1	1	1	1	XXX	XXX	XXX	XXX
 Indicated Firm Energy Requirement Within Province (9 + 10) 	2,216	2,427	2,526	2,670	2,852	3,086	3,271	3,471	3,681	4,021
12. Deliveries of Firm Energy to other utilities:										
(a) In other Provinces (b) Outside Canada	79	79	79	79	114	114	114	114	114	į į
(c) Total (a + b)	79	79	79	79	114	114	114	114	114	8
 Firm Energy Requirement on the Province (11 + 12) 	2,295	2,506	2,605	2,749	2,966	3,200	3,385	3,585	3,795	4,021

2,038

1,911

1,749

1,595

1,448

1,300

1,188

1,092

982

905

Firm Energy Requirement on the Province (11 + 12)

13.

SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

SUMMARY - SASKATCHEWAN Thousands of Kilowatts

								FOREC	A S T	
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
CAPABILITY:										
1. Net Generating Capability:				i.	u	CO	82	82	82	82
(a) Hydro (b) Thermal	85 125	85 157	168	193	239	253	323	373	164	497
2. Purchases of Firm Power under firm obligation from other utilities										
(a) In other Provinces (b) Outside Canada	1 1	1 1		1 (1 (1 1	1 1	1 1	1 1	
Deliveries of Firm Power to other utilities:								ţ	Ċ	S
(a) In other Provinces (b) Outside Canada	80 1	77	- 2	- 79	80		80	80	08	90
Net Capability (1 + 2 - 3)	142	165	174	199	244	256	325	37.5	667	667
			A C	TUAL				FOREC	AST	
	107	116	134	159	187	220	250	282	317	353
5. Within Frovince 6. Indicated Chartson or Rejection	È '			,	1	1	XXX	XXX	xxx	XXX
7. Indicated Demand within Province	107	116	134	. 159	187	220	250	282	317	353
(5 + 6) INDICATED RESERVE:				u	l	1	+	63	+ 182	+ 146
8. Difference (4 - 7)	+ 35	67 +	07 +	07 +	/5 +		٠	- 11		
			MIL	LIONS	OF KI	LOWATTHO	URS			
PIRM ENERGY REQUIREMENT:										
9. Firm Energy Requirement within Province	405	467	550	629	742	877	1,024	1,178	1,340	1,467
10. Indicated Shortage or Rejection		1	1	1	-		XXX	XXX	VWV	000
 Indicated Firm Energy Requirement within Province (9 + 10) 	405	467	550	629	742	877	1,024	1,178	1,340	1,467
12. Deliveries of Firm Energy to other utilities:										
(a) In other Provinces	200	515	542	559	558	571	571	571	571	571
(c) Total (a + b)	500	515	542	559	558	571	571	571	571	57.1

TABLE I

SUMMARY - ALBERTA

Thousands of Kilowatts

			0.10		ì	i.		FORECAST	AST	
	000	1951	1952	1953	1954	1955	1956	1957	1958	1959
CAPABILITY:										
1. Net Generating Capability:										
(a) Hydro (b) Thermal	83 108	162	162	162 187	202	220	332	237	237 436	304
 Purchases of Firm Power under firm obligation from other utilities; 										
(a) In other Provinces (b) Outside Canada	1 1	1 1		1 1	4 -	1 1	1 1	m ı	- 2	et 1
 Deliveries of Firm Power to other utilities: 										
(a) In other Provinces (b) Outside Canada	en 1	ו חו	7 -	00 b		m ۱	7	1 1	1 1	1 1
4. Net Capability (1 + 2 - 3)	188	266	274	341	399	453	545	620	675	741
				ACTUAL				FOREC	AST	
FIRM POWER PEAK LOAD:										
5. Within Province	176	220	233	284	310	389	436	493	555	630
6. Indicated Shortage or Rejection	•	1	'	•	ŧ	ı	ххх	ххх	XXX	XXX
7. Indicated Demand within Province (5 + 6)	176	220	233	284	310	389	436	493	555	630
INDICATED RESERVE:										
8. Difference (4 - 7)	+ 12	97 +	+ 41	+ 57	68 +	+ 64	+ 109	+ 127	+ 120	+ 111
			IW	LLIONS	OFK	ILOWATTH	OURS			
FIRM ENERGY REQUIREMENT:										
9. Firm Energy Requirement within Province	1,023	1,114	1,167	1,372	1,571	1,838	2,030	2,277	2,552	2,869
10. Indicated Shortage or Rejection	,	1	•	1	ı	1	XXX	ххх	ххх	XXX
 Indicated Firm Energy Requirement within Province (9 + 10) 	1,023	1,114	1,167	1,372	1,571	1,838	2,030	2,277	2,552	2,869
12. Deliveries of Firm Energy to other utilities:										
(a) In other Provinces (b) Outside Canada	14 -	20	30	91	1 1	1 1	2 -	1 1		1 1
(c) Total (a + b)	14	20	30	9		1	2	,	,	-
 Firm Energy Requirement on the Province (11 + 12) 	1,037	1,134	1,197	1,378	1,571	1,838	2,032	2,277	2,552	2,869

	COLUMBIA	trs
	COLI	of Kilowatts
	BRITISH	K1
	RIT	of
1	-	ands
	SUMMARY	Thousands

								E C E	A D I	
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
CAPABILITY:										
1. Net Generating Capability:								0		1
(a) Hydro (b) Thermal	850	905	996	96	1,574	1,610	1,895	2,239	2,466	232
2. Purchases of Firm Power under firm obligation from other utilities:										
(a) In other Provinces (b) Outside Canada	m 1	10 1	7 -	60 I	1 1	m 1	7		1 1	1 1
Deliveries of Firm Power to other utilities:										
(a) In other Provinces (b) Outside Canada	30	30	30	30	30	20	1 1	m)	2 -	
4. Net Capability (1 + 2 - 3)	895	954	1,023	1,073	1,638	1,695	2,013	2,391	2,693	2,983
			ACT	UAL				FOREC	AST	
FIRM POWER PEAK LOAD:										
5. Within Province	773	825	895	974	1,239	1,351	1,702	1,991	2,219	2,523
6. Indicated Shortage or Rejection	1	1	1	12	1	1	XXX	XXX	XXX	XXX
7. Indicated Demand within Province (5 + 6)	773	825	895	986	1,239	1,351	1,702	1,991	2,219	2,523
INDICATED RESERVE:										
Difference (4 - 7)	+ 122	+ 129	+ 128	+ 87	+ 399	+ 344	+ 311	+ 400	ħ/ħ +	1 400
			MILI	LIONS	OF KIL	OWATTHOU	I R S			
FIRM ENERGY REQUIREMENT:										
Firm Energy Requirement within Province	4,437	4,651	4,889	5,358	6,284	7,877	9,813	12,169	14,163	15,958
Indicated Shortage or Rejection	1	1	1	•	1	1	xxx	XXX	XXX	XXX
Indicated Firm Energy Requirement within Province (9 + 10)	4,437	4,651	4,889	5,358	6,284	7,877	9,813	12,169	14,163	15,958
Deliveries of Pirm Energy to other utilities:										
(a) In other Provinces (b) Outside Canada	184	184	184	184	10	10	10	10	11	11
(c) Total (a + b)	184	184	184	184	194	132	10	10	11	11
13. Firm Energy Requirement on the Province (11 + 12)	4,621	4,835	5,073	5,542	6,478	8,009	9,823	12,179	14,174	15,969

TABLE I

SUMMARY - YUKON & NORTH WEST TERRITORIES Thousands of Kilowatts

								1	-	
					1	1			0 4	
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
CAPABILITY:										
1. Net Generating Capability:							The same of			
(a) Hydro	21	21	24	24	24	22	22	22	33	33
2. Purchases of Firm Power under firm										
obligation from other utilities:										
(a) In other Provinces(b) Outside Canada	1 1	1 4	1 1	1 1	I F			1 1	1 1	1 1
3. Deliveries of Firm Power to other utilities;										
(a) In other Provinces(b) Outside Canada	1 1	1 1	1 1	1 1	1 4	1 1	1 1	1 1	1 1	
4. Net Capability (1 + 2 - 3)	21	21	24	24	24	22	22	22	33	33
			ACT	TUAL				FOREC	AST	
FIRM POWER PEAK LOAD:										
5. Within Province	14	14	16	17	18	19	20	21	26	28
6. Indicated Shortage or Rejection	•	1	-	-	1		ххх	XXX	ххх	XXX
7. Indicated Demand Within Province (5 + 6)	14	14	16	17	18	19	20	21	26	28
INDICATED RESERVE:										
8. Difference (4 - 7)	+ 7	+ 7	∞ +	+ 7	9 +	e +	+ 5	+ 1	+ 7	+ 5
			MIL	LIONS	OF KI	LOWATTHO	URS			
FIRM ENERGY REQUIREMENT:										
9. Firm Energy Requirement within Province	67	99	99	83	89	96	66	66	120	127
10. Indicated Shortage or Rejection	1	1	1	,	1	ŧ	XXX	xxx	xxx	XXX
<pre>11. Indicated Firm Energy Requirement within Province (9 + 10)</pre>	67	79	99	83	89	96	66	66	120	127
12. Deliveries of Firm Energy to other utilities:										
(a) In other Provinces(b) Outside Canada	1 1	1 1	()	1 1	() (1 1	1 1	1 1	1 1	
(c) Total (a + b)	1	1	1	1	9	ą	1	1	ı	ŝ
 Firm Energy Requirement on the Province (11 + 12) 	29	779	99	83	89	96	66	66	120	127
	The state of the s	The second secon					The second secon	The second secon	The second secon	-

Thousands of Kilowatts SUMMARY - CANADA

	((i.	0	6301	1057	1055		FOREC	AST		
	1950	1601	7641	1933	+C61	000	1956	1957	1958	1959	
SAPABILITY:											
Net Generating Capability:											
(a) Hydro (b) Thermal	8,480	8,990	9,619	10,129	11,665 1,436	12,153 1,752	12,895	14,045	15,487 2,803	16,358 2,981	
Purchases of Firm Power under firm obligation from other utilities:											
(a) In other Provinces (b) Outside Canada	21	22	23	24	29	388	36	38	39	44	
Deliveries of Firm Power to other utilities:											
(a) In other Provinces (b) Outside Canada	176	175	178	177	176	166	146	146	145	100	
Net Capability (1 + 2 - 3)	8,966	9,714	10,638	11,523	12,954	13,777	14,737	16,166	18,184	19,283	
			A C	TUAL				FORE	CAST		-
IRM POWER PEAK LOAD:											24 -
Within Canada	8,095	8,772	9,724	10,320	11,121	12,227	13,316	14,529	15,815	17,086	-
Indicated Shortage or Rejection	217	321	3	80	4	75	XXX	XXX	XXX	XXX	
Indicated Demand within Canada (5 + 6)	8,312	9,093	9,727	10,400	11,125	12,291	13,316	14,529	15,815	17,086	
NDICATED RESERVE:											
8. Difference (4 - 7)	+ 654	+ 621	+ 911	+ 1,123	+ 1,829	+ 1,486	+ 1,421	+ 1,637	+ 2,369	+ 2,197	
			I W I	LLIONS	OFK	ILOWATTH	OURS				
IRM ENERGY REQUIREMENT:											
Firm Energy Requirement within Canada	48,367	54,277	57,490	62,085	65,967	72,255	76,951	85,653	93,970	101,508	
Indicated Shortage or Rejection	378	312	949	e	11	378	XXX	XXX	XXX	ххх	
Indicated Firm Energy Requirement within Canada $(9 + 10)$	48,745	54,589	57,536	62,088	65,978	72,633	76,951	85,653	93,970	101,508	
Deliveries of Firm Energy to other utilities:											
(a) In other Provinces (b) Outside Canada	1,748	1,762	1,728	1,713	1,715	1,332	1,230	1,229	1,229	1,042	
(c) Total (a + b)	1,748	1,762	1,728	1,713	1,715	1,332	1,230	1,229	1,229	1,042	
Firm Energy Requirement on Canada (11 + 12)	50,493	56,351	59,264	63,801	67,693	73,965	78,181	86,882	95,199	102,550	

SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD TABLE II

NET GENERATING CAPABILITY WITHIN PROVINCES*
Thousands of Kilowatts

								FOREC	AST		PERCEN	PERCENTAGE CHANGE	
PROVINCE	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1951- 1955	1955- 1959	1951-
Newfoundland	186	198	198	215	221	221	236	238	261	261	11.6	18.1	31.8
Prince Edward Island	10	18	18	18	18	18	25	26	26	26	0.0	47.47	44.4
Nova Scotia	207	246	269	298	316	384	381	677	697	240	56.1	9.04	119.5
New Brunswick	166	172	180	218	218	217	238	311	354	398	26.2	83.4	131.4
Quebec	4,304	4,563	4,855	5,279	5,358	5,561	5,953	6,222	6,704	7,189	21.9	29.3	57.5
Ontario	2,476	2,734	3,172	3,392	3,987	4,386	4,436	4,887	5,783	5,816	4.09	32.6	112.7
Manitoba	428	423	497	510	568	593	593	653	713	773	40.2	30.4	82.7
Saskatchewan	210	242	253	278	324	335	405	455	579	579	38.4	72.8	139.3
Alberta	191	271	281	349	395	957	552	617	673	740	68.3	62.3	173.1
British Columbia	922	979	1,046	1,095	1,672	1,712	2,006	2,394	2,695	2,984	74.9	74.3	204.8
Yukon and N. W. T.	21	21	54	24	24	22	22	22	33	33	4.8	50.0	57.1
Canada	9,121	9,867	10,793	11,676	13,101	13,905	14,847	16,274	18,290	19,339	40.9	39.1	0.96

* Hydro plus thermal (Table I, item 1 a + 1 b)

TABLE III

FIRM POWER PEAK LOAD WITHIN PROVINCES*

Thousands of Kilowatts

								FOREC	AST		PERCENTAGE	TAGE CHANGE	EQ.
PROVINCE	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1951~ 1955	1955- 1959	1951- 1959
Newfoundland	175	180	184	193	200	205	216	220	232	242	13.9	18.0	34.4
Prince Edward Island	œ	œ	Q	10	11	12	13	14	15	18	50.0	50.0	125.0
Nova Scotia	165	185	213	237	246	278	304	336	368	400	50.3	43.9	116.2
New Brunswick	151	158	167	175	184	197	211	231	311	37.1	24.7	88.3	134.8
Quebec	3,123	3,412	3,702	3,899	4,037	4,353	4,651	4,981	5,338	5,550	27.6	27.5	62.7
Ontario	3,201	3,521	3,714	3,928	4,160	4,673	4,884	5,297	5,726	6,231	32.7	33.3	77.0
Manitoba	419	454	097	512	533	594	629	663	708	740	30.8	24.6	63.0
Saskatchewan	107	116	134	159	187	220	250	282	317	353	89.7	60.5	204.3
Alberta	176	220	233	284	310	389	436	493	555	630	76.8	62.0	186.4
British Columbia	773	825	895	986	1,239	1,351	1,702	1,991	2,219	2,523	63.8	86.8	205.8
Yukon and N. W. T.	14	14	16	17	18	19	20	21	26	28	35.7	47.4	100.0
Canada	8,312	9,093	9,727	10,400	11,125	12,291	13,316	14,529	15,815	17,086	35.2	39.0	87.9
			A SALES OF THE PARTY OF THE PAR	The second secon									

^{*} Indicated Firm Demand (Table 1, item 7)

SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE IV

FIRM ENERGY REQUIREMENT WITHIN PROVINCES*

Millions of Kilowatt Hours

			ACTU	A L				FORE	CAST		PERCE	PERCENTAGE CHANGE	35
PROVINCE	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1951- 1955	1955- 1959	1951- 1959
Newfoundland	1,050	1,031	1,147	1,180	1,222	1,287	1,330	1,332	1,425	1,467	24.8	14.0	42.3
Prince Edward Island	31	34	37	41	97	51	56	63	70	77	50.0	51.0	126.5
Nova Scotia	881	1,017	1,112	1,201	1,267	1,347	1,463	1,593	1,715	1,847	32.4	37.1	81.6
New Brunswick	828	886	883	901	1,043	1,021	1,098	1,192	1,658	2,090	15.2	104.7	135.9
Quebec	20,278	23,120	24,234	26,440	27,677	29,558	29,527	32,665	35,144	36,725	27.8	24.2	58.8
Ontario	17,529	19,778	20,925	22,213	23,185	25,595	27,240	29,614	32,102	34,860	29.4	36.2	76.3
Manitoba	2,216	2,427	2,526	2,670	2,852	3,086	3,271	3,471	3,681	4,021	27.2	30.3	65.7
Saskatchewan	405	467	550	629	742	877	1,024	1,178	1,340	1,467	87.8	67.3	214.1
Alberta	1,023	1,114	1,167	1,372	1,571	1,838	2,030	2,277	2,552	2,869	65.0	56.1	157.5
British Columbia	4,437	4,651	4,889	5,358	6,284	7,877	9,813	12,169	14,163	15,958	4.69	102.6	243.1
Yukon and N. W. T.	29	99	99	88	88	96	66	66	120	127	50.0	32.3	98.4
Canada	48,745	54,589	57,536	62,088	65,978	72,633	76,951	85,653	93,970	101,508	33.1	39.8	85.9

* Table I, item 11

SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE V

INDICATED RESERVE*

T T								\$ \$ \$			TOUTHOUT		
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1951- 1955	1955- 1959	1951- 1959
Newfoundland													
1. Gross Capability	186	198	198	215	221	221	236	238	261	261	11.6	18.1	31.8
2. Total Firm Demand on the Province	175	180	184	193	200	205	216	220	232	242	13.9	18.0	34.4
3. Indicated Reserve (1 - 2)	11	18	14	22	21	16	20	18	29	19	XXX	XXX	XXX
4. Indicated Reserve expressed as a % of Total Firm Demand	6.3	10.0	7.6	11.4	10.5	7.8	9.3	8.2	12.5	7.9	XXX	XXX	XXX
Prince Edward Island													
1. Gross Capability	10	18	18	18	18	18	25	26	26	26	0.0	44.4	44.4
2. Total Firm Demand on the Province	∞	00	6	10	11	12	13	14	15	18	50.0	50.0	125.0
3. Indicated Reserve (1 - 2)	2	10	6	00	7	9	12	12	11	00	ххх	xxx	xxx
4. Indicated Reserve expressed as a % of Total Firm Demand	25.0	125.0	100.0	80.0	63.6	50.0	92.3	85.7	73.3	47.4	XXX	ххх	XXX
Nova Scotia													
1. Gross Capability	207	246	269	298	316	384	381	644	694	240	56.1	9.04	119.5
2. Total Firm Demand on the Province	167	187	215	239	248	280	306	338	370	403	49.7	43.9	115.5
3. Indicated Reserve (1 - 2)	07	65	75	59	89	104	7.5	111	66	137	xxx	XXX	ххх
4. Indicated Reserve expressed as a % of Total Firm Demand	24.0	31.6	25.1	24.7	27.4	37.1	24.5	32.8	26.8	34.0	xxx	XXX	xxx
New Brunswick													
1. Gross Capability	168	174	182	220	220	221	243	316	359	405	27.0	83.3	132.8
2. Total Firm Demand on the Province	156	162	174	181	189	202	216	236	315	37.5	24.7	85.6	131.5
3. Indicated Reserve (1 - 2)	12	12	00	39	31	19	27	80	777	30	xxx	XXX	XXX
4. Indicated Reserve expressed as a % of Total Firm Demand	7.7	7.4	4.6	21.5	16.4	9.6	12.5	33.9	14.0	8.0	xxx	XXX	xxx

^{*} Gross Capability (Table I, item 1 + 2) Less Total Firm Demand on the Provinces (Table I, item 7 + 3)

SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE V

INDICATED RESERVE*
Thousands of Kilowatts

								FOREC	AST		PERCE	PERCENTAGE CHANGE	[6]
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1951- 1955	1955- 1959	1951- 1959
Quebec													
1. Gross Capability	4,305	4,564	4,856	5,280	5,363	5,567	5,954	6,223	6,705	7,190	22.0	29.5	57.5
2. Total Firm Demand on the Province	3,890	4,181	4,471	4,668	4,787	5,105	5,363	5,693	6,050	6,263	22.1	22.7	8.67
3. Indicated Reserve (1 - 2)	415	383	385	612	576	462	591	530	655	927	XXX	XXX	XXX
4. Indicated Reserve expressed as a % of Total Firm Demand	10.7	9.5	8.6	13.1	12.0	0.6	11.0	9.3	10.8	14.8	XXX	XXX	XXX
Ontario													
1. Gross Capability	3,217	3,478	3,917	4,138	4,719	5,127	5,139	5,592	6,475	6,513	47.4	27.0	87.3
2. Total Firm Demand on the Province	3,287	3,607	3,800	4,014	4,246	4,759	4,970	5,383	5,812	6,272	31.9	31.8	73.9
3. Indicated Reserve (1 - 2)	- 70	- 129	117	124	473	368	169	209	663	241	XXX	XXX	XXX
4. Indicated Reserve expressed as a % of Total Firm Demand	1	•	3.1	3.1	11.1	7.7	3.4	3.9	11.4	3.8	XXX	XXXX	XXX
Manitoba													
1. Gross Capability	967	200	576	589	648	672	673	733	793	853	34.4	26.9	70.6
2. Total Firm Demand on the Province	428	697	697	521	246	809	643	677	708	140	31.3	21.7	59.8
3. Indicated Reserve (1 - 2)	89	37	107	89	102	79	30	56	85	113	XXX	XXX	xxx
4. Indicated Reserve expressed as a % of Total Firm Demand	15.9	8.0	22.8	13.1	18.7	10.5	4.7	8.3	12.0	15.3	XXX	XXX	XXX
Saskatchewan	210	242	253	27.8	324	335	405	557	579	579	38.4	72.8	139.3
2. Total Firm Demand on the Province	175	193	213	238	267	299	330	362	397	433	54.9	44.8	124.4
3. Indicated Reserve (1 - 2)	35	67	40	07	57	36	75	93	182	146	XXX	XXX	XXX
4. Indicated Reserve expressed as a % of Total Firm Demand	20.0	25.4	18.8	16.8	21.3	12.0	22.7	25.7	45.8	33.7	xxx	XXX	xxx

^{*} Gross Capability (Table I, item 1 + 2) Less Total Firm Demand on the Provinces (Table I, item 7 + 3)

SECOND ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE V

Thousands of Kilowatts INDICATED RESERVE*

								FOREC	CAST		PERCI	PERCENTAGE CHANGE	22	,
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1951- 1955	1955- 1959	1951- 1959	1
Alberta														
1. Gross Capability	191	271	281	349	399	456	552	620	67.5	741	68.3	62.5	173.4	
2, Total Firm Demand on the Province	179	225	240	292	310	392	443	493	555	630	74.2	60.7	180.0	
3. Indicated Reserve (1 - 2)	12	97	41	57	89	49	109	127	120	111	XXX	XXX	XXX	1
 Indicated Reserve expressed as a % of Total Firm Demand 	6.7	20.4	17.1	19.5	28.7	16.3	24.6	25.8	21.6	17.6	XXX	XXX	XXX	
British Columbia	925	786	1.053	1.103	1.672	1.715	2.013	2 394	2 695	2 984	74.3	74.0	203.3	
2. Total Firm Demand on the Province	803	855	925	1,016	1,273	1,371	1,702	1,994	2,221	2,524	4.09	84.1	195.2	30 -
3. Indicated Reserve (1 - 2)	122	129	128	87	399	344	311	007	474	094	XXX	XXX	XXX	
4. Indicated Reserve expressed as a % of Total Firm Demand	15.2	15.1	13.8	9.6	31.3	25.1	18.3	20.1	21.3	18.2	XXX	XXX	XXX	
Yukon and N. W. T.														H
1. Gross Capability	21	2.1	24	24	24	22	22	22	33	33	6.8	50.0	57.1	
2. Total Firm Demand on the Province	14	14	16	17	18	19	20	21	26	28	35.7	4.74	100.0	
3. Indicated Reserve (1 - 2)	7	7	00	7	9	. 3	2	1	7	5	ххх	ххх	ххх	i
4. Indicated Reserve expressed as a % of Total Firm Demand	50.0	50.0	50.0	41.2	33,3	15.8	10.0	4.8	26.9	17.9	ххх	XXX	XXX	
Janada				,										1
1. Gross Capability	9,142	9,889	10,816	11,700	13, 130	13,943	14,883	16,312	18,329	19,383	41.0	39.0	0.96	
 Total Firm Demand on Canada 	8,488	9,268	9,905	10,577	11,301	12,457	13,462	14,675	15,960	17,186	34.4	38.0	85.4	1
3. Indicated Reserve (1 - 2)	654	621	911	1,123	1,829	1,486	1,421	1,637	2,369	2,197	XXX	XXX	XXX	
4. Indicated Reserve expressed as a % of Total Firm Demand	7.7	6.7	9.2	10.6	16.2	11.9	10.6	11.2	14.8	12.8	XXX	XXX	XXX	

^{*} Gross Capability (Table I, item 1 + 2) Less Total Firm Demand on the Provinces (Table I, item 7 + 3)

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The Canadian Electrical Association Statistical Policy Committee serves as an over-all co-ordinating agency for these surveys - the connecting link between the Dominion Bureau of Statistics, The Canadian Electrical Association and the interests of the electric power utility industry-at-large.

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. Mr. G.A. Richardson,
Dominion Bureau of Statistics,
Ottawa, Ontario.

The function of an Area Representative is primarily to act as the direct liaison between the company representatives in his area and the Dominion Bureau of Statistics on all matters relating to the power survey. For this reason Area Representatives must have the complete co-operation of Company representatives in securing the information required for the power survey.











ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

March, 1957



DOMINION BUREAU OF STATISTICS

Public Finance and Transportation Division
Transportation and Public Utilities Section



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Third ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

March, 1957

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TABLE OF CONTENTS

		Page
Introduction		1
Review of Su	rvey Results	2
Definitions		5
Chart A:	Net Generating Capability within Canada, 1950 through 1960	6
Chart B:	Net Capability and Firm Demand within Canada, 1950 through 1960	7
Chart C:	Net Generating Capability within Provinces, 1950 through 1960	9
Chart D:	Net Capability and Firm Demand within Provinces, 1950 through 1960	10
Chart E:	Firm Energy Requirement within Canada, 1950 through 1960	12
Table 1:	Summary by Provinces and Canada, 1950 through 1960	13
Table II:	Net Generating Capability within Provinces, 1950 through 1960	25
Table III:	Firm Power Peak Load within Provinces, 1950 through 1960	26
Table IV:	Firm Energy Requirement within Provinces, 1950 through 1960	27
Table V:	Indicated Reserve, 1950 through 1960	28
Canadian Ele	ctrical Association Statistical Policy Committee	31
Electric Por	wer Survey Committee	32

Introduction

This report presents the results of the third annual Electric Power Survey of Capability and Load which was conducted in March, 1957 by the Dominion Bureau of Statistics in co-operation with the Canadian Electrical Association. The 108 electric power producers covered by this survey include all major private and publicly - operated electric utilities and certain other power-producing companies. These 108 electric power producers generated approximately 93% of the total kilowatt hours produced in the country. The figures contained in this report can, therefore, be regarded as representative of the whole electric power industry in Canada. In some provinces, however, the percentage coverage is considerably lower than for the country as a whole.

Previous surveys incorporated only those major power-producing companies which sold part of their generation to the public. However, this year all power producers of 10,000,000 kilowatt hours or over were included in the survey regardless of whether they sold any energy. For comparative purposes, figures back to 1950, have been amended to include these additional companies.

Capability and load figures are based on the situation as it existed at the time of each company's annual firm power peak load. Throughout the report, the full amount of contractual commitments for firm power is reported.

Net generating capability, as shown in the tables, is the output of generating facilities after deducting station service. It is based on actual operating experience assuming all equipment available at the time of the annual firm power peak load with no deduction for equipment not operating at that time, and with no allowance made for the effect of unfavourable water and ice conditions. Net generating capability should not be construed as representing the total installed capacity of the facilities on the basis of name-plate ratings.

For the years 1950 to 1956, the net generating capability is shown for installations actually in existence during the month in which the firm power peak load occurred. For the years 1957 to 1960 it is forecast by adding new installations to the 1956 capability and deducting units retired.

The power situation in any province or for the country as a whole can be presented in several ways. Two of these are contained in the report and are based on the demand within the province (Table 1) and the demand on the province (Table V). In each case the appropriate capability is also shown. Demand within the province is related to net capability which means generating capability plus purchases outside the province less deliveries outside the province.

Presenting the power situation within Canada and within the individual provinces provides a measure of the growth of the industry within geographic areas and is of interest in measuring the contribution of the industry to the economic growth of the country as a whole. Demand on the province, however, is related to gross capability which is generating capability plus purchases outside the province and is of interest primarily from a utility point of view.

Some care must be exercised in the interpretation of these data. For example, the difference between gross capability and total firm demand is an indication of available reserves of power. Since power producers are not, however, all fully interconnected, reserves of power cannot always be completely utilized.

Review of Survey Results

Summary:

Net Generating Capability: The generating capability of Canada in 1956 amounted to 14,983,000 kilowatts, an increase of 5.9 per cent over the 1955 total of 14,147,000 kilowatts. The generating capability is expected to be 22,111,000 kilowatts in 1960, an increase of 47.6 per cent over 1956. The proportion of thermal generation to the total is expected to rise from 14.3 per cent in 1955 to 19.5 per cent in 1959.

Firm Power Peak Load: The firm power peak load or demand within Canada amounted to 13,917,000 kilowatts in 1956, an increase of 11.0 per cent over the 1955 total of 12,536,000 kilowatts. By 1960 the load is forecast to rise 36.8 per cent to 19,040,000 kilowatts.

Indicated Reserve: The indicated reserve in Canada in 1956 was 1,008,000 kilowatts and is expected to be 3,011,000 kilowatts in 1960.

Firm Energy Requirement: The indicated firm energy requirement in Canada was 82,679,000,000 kilowatt hours in 1956, an increase of 11.7 per cent over the 1955 total of 74,032,000,000 kilowatt hours. It is expected to climb to 114,-365,000,000 kilowatt hours in 1960 or by 37.6 per cent.

Table 1 - Summary (Pages 13 to 24): This table presents the information which was collected from each of the 108 producers of power included in the survey, summarized for each of the provinces and for Canada. It shows the capability, firm power peak load, indicated reserve, and firm energy requirements.

Table II - Net Generating Capability Within Provinces (Page 25): The growth in net generating capability as illustrated in Table II is quite impressive. During the four-year period 1952-1956 the growth for Canada as a whole amounted to 3,979,000 kilowatts or 36.2 per cent over the 1952 total. The indicated

rowth of 47.6 per cent during the forecast period 1956 to 1960 represents in additional 7,128,000 kilowatts of net generating capability. The total growth, both actual and planned over the period 1952 to 1960, is 101 per cent.

Although the forecast of net generating capability for Canada as a whole shows an increase of 101 per cent for the period 1952 to 1960, it caries considerably for the several provinces from a low of 48.0 per cent for lewfoundland to 258.4 per cent for Alberta.

able III - Firm Power Peak Load Within Provinces (Page 26): During the eriod 1952 to 1960 the firm power peak load or demand within Canada is exected to increase by 9,096,000 kilowatts or 91.5 per cent.

Whereas the actual increase in firm power peak demand experinced during the period 1952 to 1956 amounted to 3,973,000 kilowatts or 40.0 er cent over the 1952 total, that forecast for the next four years amounts o 5,123,000 or 36.8 per cent over the 1956 total.

The increase, 1952-1960, for Canada as a whole, reflects a airly steady and consistent growth from the 9,944,000 kilowatts in 1952 to 9,040,000 forecast for 1960. The actual growth experienced in the past four ears, 1952 to 1956 amounted to a rate of 10.0 per cent per annum. The increase, orecast for the next four years 1956-1960 inclusive, is equal to a rate of growth f 9.2 per cent per annum.

able IV - Firm Energy Requirement within Provinces (Page 27): Kilowatt hours eeded to meet the firm energy requirement within the country totalled 82,679,000,000 n 1956, an increase of 23,873,000,000 kilowatt hours or 40.6 per cent over the 952 total of 58,806,000,000. During the period 1956 to 1960, the firm energy equirement is expected to rise substantially each year to a total of 114,365,000,000 ilowatt hours in 1960, or by 37.6 per cent. By 1960, the energy requirements are orecast to be almost double those in 1952.

<u>able V - Indicated Reserve (Page 28)</u>: The electric utility industry must provide ufficient power to meet demand and to provide for contingencies.

Gross capability for any province may be defined as consisting of et generating capability (hydro plus thermal) plus purchases of firm power under irm obligation from utilities outside the province. Total demand for any province onsists of firm power peak load within the province, plus any indicated shortage r rejected load as well as deliveries of firm power to utilities outside the rovince. In Table V, gross capability is related to total firm demand on the rovinces and on Canada. The difference or indicated reserve, expressed as a ercentage of total firm demand, shows to what extent productive resources have een able to keep pace with total firm demand in this rapidly growing industry.

For the three years 1952, 1956 and 1960, the indicated reserves in Canada were 905,000, 1,008,000 and 3,011,000 kilowatts, which correspond to reserves of 8.3, 6.8 and 15.1 per cent, respectively, over the total demand in those years. Figures for the various provinces and Canada vary considerably from year to year and are shown in detail in this table.

Charts: On pages 6 to 12, five charts are presented to show results of the survey of the electric power industry in Canada in graphic form.

Chart A - Net Generating Capability within Canada (Page 6): This chart portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important. Total thermal generation has increased from 1,331,000 kilowatts or 12.1 per cent of the net generating capability within Canada in 1952 to 4,316,000 kilowatts or 19.5 per cent forecast for 1960.

Chart B - Net Capability and Firm Demand within Canada (Page 7): Chart B provides an indication of the reserves available to meet firm demand for electric power within Canada.

<u>Chart C - Net Generating Capability within Provinces (Pages 8-9):</u> This chart presents for each of the provinces, the information contained in Chart A. It illustrates the comparative importance of thermal and hydro generation within provinces.

Chart D - Net Capability and Firm Demand within Provinces (Pages 10-11): The fourth chart provides a graphic indication of the year to year ability of each of the provinces to meet its firm demand for electric power.

Chart E - Firm Energy Requirement within Canada (Page 12): This is an illustration of the growth in Canadian firm energy requirements by years for the period 1950 to 1960.

DEFINITIONS

NET GENERATING CAPABILITY

The maximum net kilowatt output (after station service) available from the generating facilities of the company, utility or system with all equipment available, at the time of the annual firm power peak load, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

FIRM POWER

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

NET CAPABILITY

The sum of net generating capability and purchases of firm power under firm obligation less deliveries of firm power under firm obligation.

FIRM OBLIGATIONS

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis.

FIRM POWER PEAK LOAD

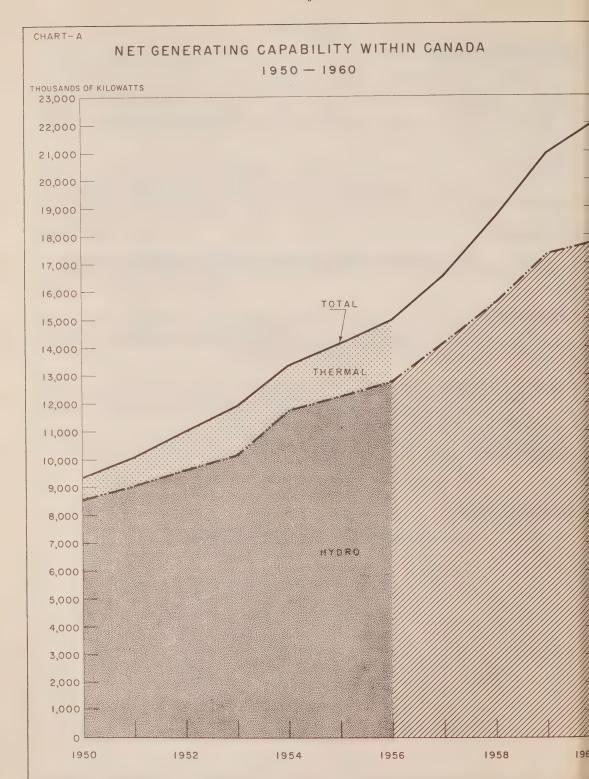
The annual firm power maximum average net kilowatt load of one hour duration within the company, utility or system.

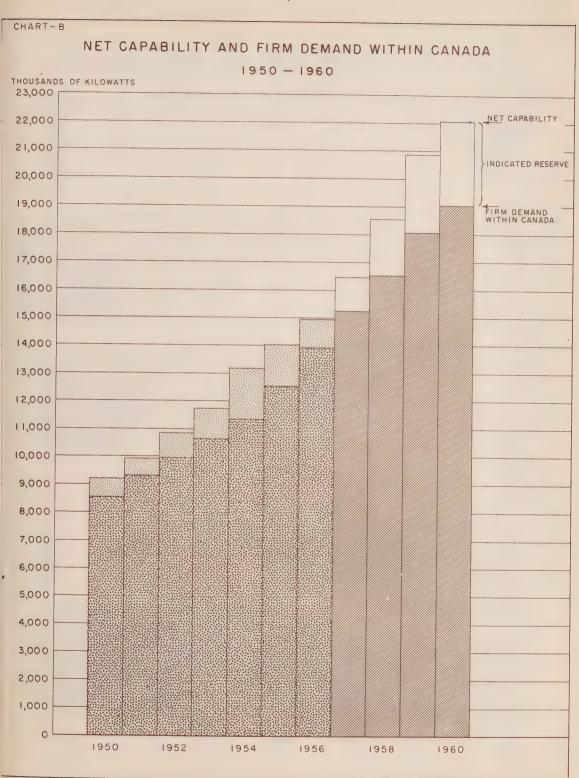
INDICATED DEMAND

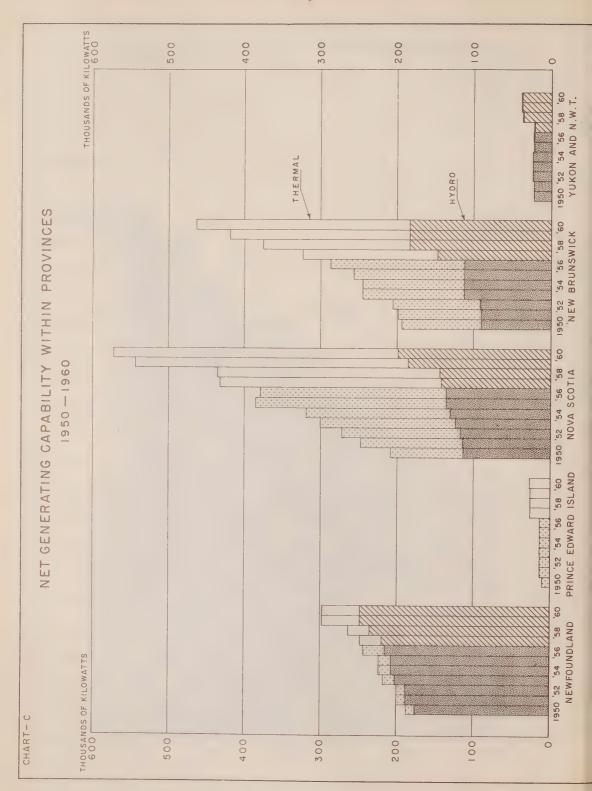
The sum of firm power peak load and indicated shortage.

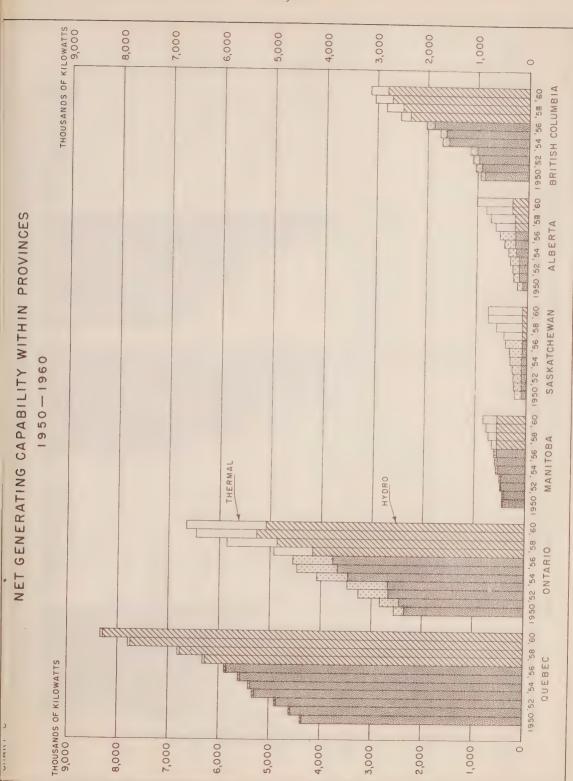
INDICATED RESERVE

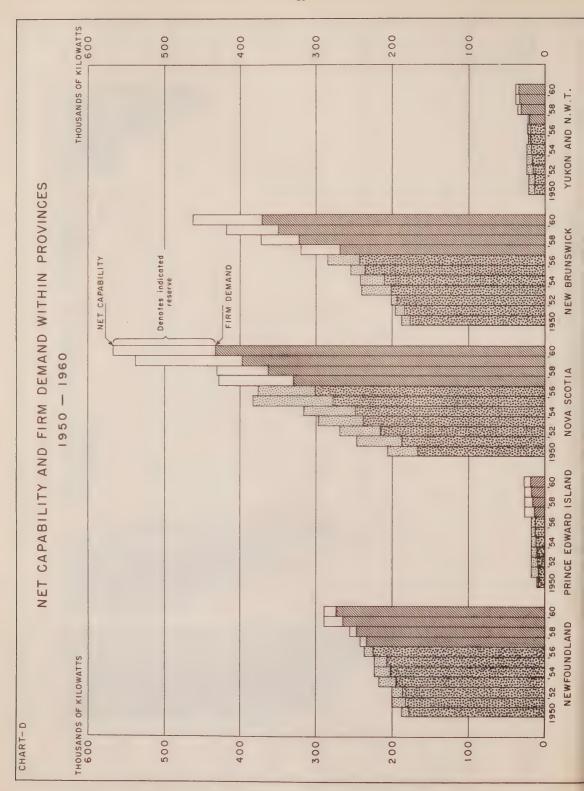
Net capability less indicated demand (+ or -).

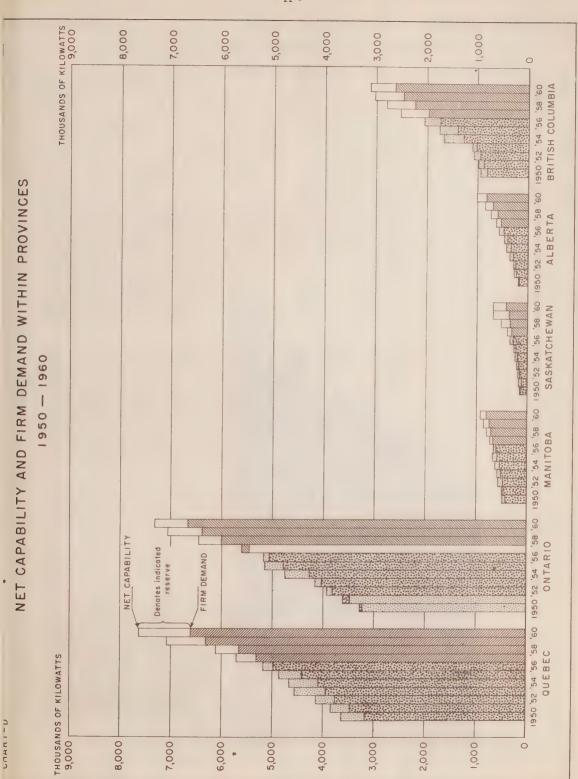














Thousands of Kilowatts SUMMARY - CANADA

TABLE I

	1950	1951	1952	1953	1954	1955	1956		FORECAST	T S A	
						0004	0067				
CAPABILITY								1957	1958	1959	1960
1. Net generating capability:											
(a) Hydro (b) Thermal	8,575	9,044	9,673	10,183	11,719	12,211	12,841	14,148	15,586	17,316	17,795
2. Receipts of firm power from:							4 6 8	1011	20,0	70000	4,310
(a) Other provinces (b) United States	21	22	23	24	29	38.	- 88	36	3.9	- 7	- 57
3. Deliveries of firm power to:											2
(a) Other provinces(b) United States	176	175	178	177	176	166	147	150	150	150	105
4. Net capability (1 + 2 - 3)	9,208	9,923	10,849	11,750	13,181	14,019	14,925	16,438	18,518	20,840	22,051
				ACTUAI	L				FOREC	AST	
	8,313	8,989	6,941	10,553	11,355	12,472	13,870	15,237	16,527	18,048	19,040
o. Indicated shortage	217	321	3	80	7	79	47	XXX	XXX	XXX	XXX
<pre>/. Indicated demand within Canada (5 + 6)</pre>	8,530	9,310	9,944	10,633	11,359	12,536	13,917	15,237	16,527	18,048	19,040
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 678	+ 613	+ 905	+ 1,117	+ 1,822	+ 1,483	+ 1,008	+ 1,201	+ 1,991	+ 2,792	+ 3,011
				MILL	IONS O	F KILO	WATT H	OURS			
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within Canada	49,635	55,516	58,760	63,437	67,331	73.654	81.133	91.834	90 836	107 630	117, 366
10. Indicated shortage	378	312	97	e	11	378	1,546	XXX	XXX	XXX	COC 'LTT
 Indicated firm energy requirement within Canada (9 + 10) 	50,013	55,828	58,806	63,440	67,342	74,032	82,679	91,834	99.826	107.639	114.365
12. Deliveries of firm energy to:											
(a) Other provinces (b) United States	1,748	1,762	1,728	1,713	1,715	1,332	1,226	1,229	1,229	1,229	1,043
(c) Total (a + b)	1,748	1,762	1,728	1,713	1,715	1,332	1,226	1,229	1,229	1,229	1,043
 Firm energy requirement on Canada (11 + 12) 	51,761	57,590	60,534	65,153	69,057	75,364	83,905	93,063	101,055	108,868	115,408

THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

SUMMARY - NEWFOUNDLAND (including Labrador)

	1950	1951	1952	1953	1954	1055	1956		FOREC	AST	
	0001	1771	761	1900	406T	1933	1930	1957	1958	1959	1960
CAPABILITY: 1. Net generating capability:											
(a) Hydro (b) Thermal	176	188	188	202 15	207	207	215	219	234 28	247	247
2. Receipts of firm power from:											
(a) Other provinces (b) United States	1 1	b 1	1 1	1 1			1 1	1 1	1 1	1 (1 1
3. Deliveries of firm power to:											
(a) Other provinces(b) United States	5 E	1 1		1 1	1 1		9 1	9 :	9 1	r co	91
4. Net capability (1 + 2 - 3)	188	200	200	217	223	223	236	241	256	290	290
				ACTUAL					FOREC	AST	
FIRM POWER PEAK LOAD:											
5. Within province	177	182	186	195	201	206	222	233	247	265	274
6. Indicated shortage		1	•		1	1	2	ххх	хэхх	XXX	ххх
7. Indicated demand within province	177	182	186	195	202	207	224	233	247	265	274
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 11	+ 18	+ 14	+ 22	+ 21	+ 16	+ 12	*	6 +	+ 25	+ 16
				MILL	IONSO	F KILO	WATT H	O.U.R.S			
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within province	1,058	1,040	1,157	1,190	1,225	1,289	1,374	1,325	1,425	1,529	1,582
10. Indicated shortage	-	,	,	8	6	10	•	ххх	ххх	ххх	XXX
11. Indicated firm energy requirement within province $(9+10)$	1,058	1,040	1,157	1,190	1,234	1,299	1,374	1,325	1,425	1,529	1,582
12. Deliveries of firm energy to:											
(a) Other provinces (b) United States	1 1	1 1		, ,			31	- 68	- 89	89	89
(c) Total (a + b)		1	-	8	1		31	89	89	89	89
13. Firm energy requirement on the province (11 + 12)	1,058	1,040	1,157	1,190	1,234	1,299	1,405	1,393	1,493	1,597	1,650

THIRD ANNUAL ELECTRIC PUWER SURVEY OF CAPABILITY AND LOAD

SUMMARY - PRINCE EDWARD ISLAND

	C L C P	, ,	0.00						FORECA	AST	
	0667	1661	767	1953	1954	1955	1956	1957	1958	1959	1960
CAPABILITY: 1. Net generating capability:											
	10	18	18	18	18	18	18	26	26	26	27
 Keceipts of tirm power from: (a) Other provinces (b) United States 	, ,	1 1	1 1	1 1		0 8	4 1		6 8	b b	e 9
3. Deliveries of firm power to:											
(a) Other provinces (b) United States		1 1	1 1		1 1	ι. •	1 1	1 1	1 1	1 1	1 1
4. Net capability (1 + 2 - 3)	10	18	18	18	18	18	18	26	26	26	27
		,	1	ACTUAL					FOREC	AST	
FIRM POWER PEAK LOAD:											
5. Within province	&	00	6	10	11	12	12	13	15	17	19
רי דווקדרמיבות מווחד במפנ			•				'	XXX	XXX	XXX	XXX
7. Indicated demand within province ($5+6$)	80	80	6	10	11	12	12	13	15	17	19
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 2	+ 10	6 +	8 +	+ 7	9 +	9 +	+ 13	+ 11	6 +	60 +
				MILL	IONSO	F KILO	WATT	HOURS			
PIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within province	31	34	37	14	97	51	53	09	67	75	83
10. Indicated shortage	1	1	•	1	1	4	1	XXX	XXX	XXX	XXXX
 Indicated firm energy requirement within province (9 + 10) 	. 31	34	37	41	949	51	53	09	19	75	83
12. Deliveries of firm energy to:											
(a) Other provinces (b) United States		1.1	٠.	4 1	1 4	1 1	1 1		8 8	5 8	E 0
(c) Total (a + b)	1	1		٠	1	1		9	4	1	
 Firm energy requirement on the province (11 + 12) 	31	34	37	41	949	51	53	09	67	75	83

2,033

1,891

1,752

1,625

1,494

1,365

1,284

1,218

1,129

1,033

897

13. Firm energy requirement on the province (11 + 12)

Deliveries of firm energy to:

12.

(a) Other provinces(b) United States(c) Total (a + b)

12 12

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THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

BLE I

SUMMARY - NOVA SCOTIA

	1950	1951	1952	1953	1954	1955	1956		FOREC	AST	
								1957	1958	1959	1960
CAPABILITY: 1. Net generating capability:											
(a) Hydro (b) Thermal	113	114	117	124 176	130	136 248	136	141 290	143 290	185	199
2. Receipts of firm power from:											
(a) Other provinces(b) United States	1 1	1 1	1 1	1 1		1 1	1 1	1 1	1 1	t t	
3. Deliveries of firm power to:											
(a) Other provinces(b) United States	- 5	- 5	- 2	- 2	1 2	8 1	- 5	1 2	1 2	m r	en :
4. Net capability (1 + 2 - 3)	207	246	269	298	316	382	376	429	431	539	568
				ACTUAL					FOREC	AST	
5. Within province	163	185	213	235	245	278	301	330	364	397	432
6. Indicated shortage	4	2	2	4	3	,		XXX	XXX	XXX	ххх
7. Indicated demand within province (5 + 6)	167	187	215	239	248	278	301	330	364	397	432
INDICATED RESERVE:											
8. Difference (4 - 7)	07 +	+ 59	+ 54	+ 59	+ 68	+ 104	+ 75	66 +	+ 67	+ 142	+ 136
				MILL	OSNOI	F KILO	WATT H	OURS			
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within province	891	1,027	1,122	1,211	1,277	1,357	1,486	1,616	1,742	1,880	2,021
10. Indicated shortage	,	•	1	•	,		4	XXX	XXX	XXX	ххх
 Indicated firm energy requirement within province (9 + 10) 	891	1,027	1,122	1,211	1,277	1,357	1,486	1,616	1,742	1,880	2,021

SUMMARY - NEW BRUNSWICK Thousands of Kilowatts

TABLE I

	1950	1951	1952	1053	105%	2000	100		FOREC	AST	
		1004	7227	1933	1924	1955	1956				
CADARIIITO								1957	1958	1959	1960
1. Net generating capability.											
(b) Thermal	102	108	92	112	112	112	112	148	184	184	184
2. Receipts of firm power from:				3	764		114	1/1	161	535	279
(a) Other provinces	2	6	,	c	c	*	ı	,			
(b) United States	i e	1 1	4 1	4 1	7 1	Ť 1	Λ Ι	۰	۰	ಯ	œ
3. Deliveries of firm power to:										1	•
(a) Other provinces	1		•	1							
(b) United States	5	4	7	9	2	ıκ	2	1 00	1 00	1 00	1 00
4. Net capability (1 + 2 - 3)	189	196	201	240	241	255	286	320	373	419	463
				ACTUAL					FOREC	AST	
FIRM POWER PEAK LOAD:											
5. Within province	177	184	193	201	210	235	243	269	322	350	122
6. Indicated shortage	•	•	1	٠		1	1		77.	200	1/0
7. Indicated demand within province										VVV	YVV
(0 + 6)	1//	184	193	201	210	236	243	269	322	350	371
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 12	+ 12	00 +	+ 39	+ 31	+ 19	+ 43	+ 51	+ 51	69 +	+ 92
				MILL	IONS OF	F KILO	WATT H	OURS			
province province	961	1,002	1.024	1.044	1.189	1 237	1 060	000	1		
10. Indicated shortage	٠					10761	70761	2,772 XXX	1,770 XXX	1,921	2,018
11. Indicated firm energy requirement											
within province (9 + 10)	961	1,002	1,024	1,044	1,189	1,237	1,262	1,392	1,778	1,921	2,018
12. Deliveries of firm energy to:											
(a) Other provinces (b) United States	- 77	' 17	* 6	26	1 6		1	1.	•	,	•
	7	Te	23	30	59	33	32	040	07	40	40
(c) Total (a + b)	41	41	33	36	59	33	32	40	07	049	07
 Firm energy requirement on the province (11 + 12) 	1,002	1,043	1,057	1,080	1,248	1,270	1,294	1,432	1,818	1,961	2,058
			The state of the s	-							

THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

SUNMARY - QUEBEC

			oui	Inousands of Ki	OI KILOWALLS							
				6	1	1 to	,,,,,,		FOREC	AST		
	1950	1951	1952	1953	1954	1955	1950	1957	1958	1959	1960	
CAPABILITY: 1. Net generating capability:												
(a) Hydro (b) Thermal	4,370	4,587	4,877	5,300	5,378	5,583	5,854	6,281	6,763	7,749	8,299	
2. Receipts of firm power from:												
(a) Other provinces (b) United States	ed 1	1 1	н +	el t	T 7	- 15	7	7 -	7	7	7 -	
3. Deliveries of firm power to:												
(a) Other provinces(b) United States	711 56	713 56	713 56	713	694 56	969	658	572 56	638	956	95	
4. Net capability (1 + 2 - 3)	3,630	3,845	4,137	4,567	4,668	4,873	5,187	5,701	6,117	7,081	7,631	
				ACTUAL	1				FOREC	AST		- 18
FIRM POWER PEAK LOAD:												-
5. Within province	3,174	3,462	3,752	3,951	4,092	4,367	4,951	5,308	5,647	6,309	6,604	
6. Indicated shortage	•	•	•	4	5	777	77	ххх	ххх	XXX	XXX	
7. Indicated demand within province $(5 + 6)$	3,174	3,462	3,752	3,955	4,092	4,411	4,995	5,308	5,647	6,309	6,604	
INDICATED RESERVE: 8. Difference (4 - 7)	+ 456	+ 383	+ 385	+ 612	+ 576	+ 462	+ 192	+ 393	+ 470	+ 772	+ 1,027	
				MILL	OSNOI	F KILO	WATT H	OURS				
FIRM ENERGY REQUIREMENT:												
9. Firm energy requirement within province	20,442	23,189	24,469	26,711	27,954	29,479	31,088	35,472	38,448	40,671	45,101	
10. Indicated shortage	123	215	37	1	1	362	1,546	XXX	XXX	ххх	XXX	
 Indicated firm energy requirement within province (9 + 10) 	20,565	23,404	24,506	26,712	27,955	29,841	32,634	35,472	38,448	40,671	45,101	
12. Deliveries of firm energy to:												
(a) Other provinces(b) United States	4,287	4,288	4,304	4,272	4,155	4,049	3,896	3,838	3,941	3,945	3,950	
(c) Total (a + b)	5,107	5,122	5,125	5,097	5,003	4,539	4,387	4,338	4,441	4,445	4,450	
13. Firm energy requirement on the province (11 + 12)	, 25,672	28,526	29,631	31,809	32,958	34,380	37,021	39,810	42,889	45,116	49,551	

TABLE I SUMMARY - ONTARIO

200		

### Secretaring capability: (a) Bydro (b) Thermal Receipts of firm power from: (c) Other provinces (d) Other provinces (e) Other provinces (e) Other provinces (f) United States Net capability (1 + 2 - 3) 120 120 120 120 120 120 120 12			1950	1951	1052	1053	1057	940	7201		FOREC	ECAST	
capability: 2,367 2,476 2,672 2,684 3,481 3,688 360 tess tess 21 22 22 23 24 25 2684 3,481 3,688 tess tess 21 22 22 23 24 25 2684 3,481 3,688 tess tess (1 + 2 - 3) 3,221 22 22 23 24 25 26 39 4,734 5,143 tess (1 + 2 - 3) 3,221 3,482 3,921 4,153 4,734 5,143 tess (1 + 2 - 3) 3,291 3,078 3,292 3,803 3,969 4,261 4,757 advithin province 3,291 3,611 3,804 4,029 4,261 4,757 A C T U A L A C T U A L 18 04 4,029 4,261 4,775 A L L L I O N S O F K I L O N A M I L L I O N S O F K I L O N A Eage c (9 + 10) 255 27 28 28 28 28 28 28 28 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20			200	1001	7061	1933	1954	CCAT	1956				
capability: 2.367										1957	1958	1959	1960
Capability:	ILITY:												
1,367	Net generating capabil	ity:											
firm power from: 199	(a) Hydro		2,367	2,476	2,672	2,684	3,481	3,688	3,778	4.140	4.871	5.251	5.084
finces ffom: 100			199	348	230	808	209	800	787	776	986	1,193	1,573
tinces 720 722 722 724 707 708 708 708 708 708 708 708 708 708		from:											
firm power to: 1	(a) Other provinces		720	722	722	722	707	708	699	582	634	655	655
Lines 85			17	22	23	24	25	33	33	36	39	42	44
1 1 1 1 1 1 1 1 1 1		:02											
e and within province 3,221 3,482 3,921 4,153 4,734 5,143 e and within province 3,291 3,803 3,969 4,261 4,757 - 77 - 129	(a) Other provinces (b) United States		85	50 50	85	185	85	85	186	86	₩ 98	186	1 41
Hage 1,078 1,078 1,078 1,292 1,803 1,606 1,261 1,757 1,806 1,261 1,757 1,806 1,261 1,757 1,806 1,261 1,757 1,806 1,261 1,757 1,806 1,806 1,806 1,806 1,806 1,806 1,809 1,8			3,221	3,482	3,921	4,153	4,734	5,143	5,180	5,447	6,443	7,054	7,314
Lage 1,078 1,078 1,292 1,803 1,804 1,261 1,757 1,804 1,124 1,475 1,604 1,261 1,475 1,604 1,126 1,630 1,630 1,124 1,473 1,104 1,1						CTUA	T				0 4 4 0 4	0	
Lege 213 319 1 60 - 18 and within province 3,291 3,611 3,804 4,029 4,261 4,757 and within province 3,291 3,611 3,804 4,029 4,261 4,775 - 7) - 129 + 117 + 124 + 473 + 368 ANT: quirement within 18,016 20,395 21,630 22,985 23,928 26,376 2 e (9 + 10) firm energy requirement (9 + 10) firm energy to: 10,27	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2										2 2	A O I	
within province 3,291 3,611 3,804 4,029 4,261 4,775 - 70 - 129 + 117 + 124 + 473 + 368 rement within 18,016 20,395 21,630 22,985 23,928 26,376 2 ergy requirement [18,271 20,492 21,639 658 658 654 687 703 703 690 668 658 657 690	Within province		3,078	3,292	3,803	3,969	4.261	4.757	2 064	5 603	700 9	376 3	022.7
within province 3,291 3,611 3,804 4,029 4,261 4,775 - 70 - 129 + 117 + 124 + 473 + 368 rement within 18,016 20,395 21,630 22,985 23,928 26,376 2 ergy requirement 18,271 20,492 21,639 22,987 23,929 26,382 2 m energy to: es 703 703 690 668 624 687 705 706 693 671 627 690			213	319	-	60		0			1000	6,000	600 0
within province 3,291 3,611 3,804 4,029 4,261 4,775 - 70 - 129 + 117 + 124 + 473 + 368 rement within 18,016 20,395 21,630 22,985 23,928 26,376 2 e Ergy requirement 18,271 20,492 21,639 22,987 23,929 26,382 2 m energy to: es 703 703 690 668 624 687 705 706 693 671 627 690)			CT.	4	8		07	8	XXX	XXX	XXX	XXX
rement within 18,016 20,395 21,630 22,985 23,928 26,376 2 ergy requirement 18,271 20,492 21,639 22,987 23,929 26,382 2 m energy to: es 703 703 690 668 624 687 705 706 693 671 627 690	Indicated demand within (5 + 6)	a province	3,291	3,611	3,804	4,029	4,261	4,775	5,064	5,603	6,004	6,375	699'9
rement within 18,016 20,395 21,630 22,985 23,928 26,376 2	ATED RESERVE:												
rement within 18,016 20,395 21,630 22,985 23,928 26,376 ergy requirement 9+10) w energy to: es 703 703 690 668 624 687 705 706 693 671 627 690	Difference (4 - 7)		1	- 129	+ 117	+ 124		+ 368	+ 116	- 156	+ 439	619 +	+ 645
rement within 18,016 20,395 21,630 22,985 23,928 26,376 ergy requirement 9 + 10) m energy to: es 703 703 699 668 624 687 705 706 693 671 627 690						IL	IONS	F KIL	138	OURS			
Firm energy requirement within Province Indicated shortage Indicated firm energy requirement Is,271 20,395 21,630 22,985 23,928 26,376 18,016 255 97 9 2 1 6 Indicated shortage Indicated firm energy requirement within province (9 + 10) Deliveries of firm energy to: (a) Other provinces (b) United States (c) Total (a + b) 705 706 893 671 683 672 689 689	ENERGY REQUIREMENT:												
Indicated shortage 255 97 21,639 22,907 20,570 20,570 10 did not be shortage 255 97 20,492 21,639 22,987 23,929 26,382 20,987 23,929 26,382 20,081 20 did not be short not not be short not		. within	18.016	20 395	21 630	2000	000	250 30	1				
Indicated firm energy requirement vithin province (9 + 10) Deliveries of firm energy to: (a) Other provinces (b) United States (c) Total (a + b)			255	97	6	2	1	9		21, 915 xxx	34, L38	36, 204 xxx	37,833
Deliveries of firm energy to: (a) Other provinces (b) United States (c) Total (a + b) (a) Other provinces (b) United States (c) Total (a + b) (d) Total (a + b)			18,271	20,492	21,639	22,987	23,929	26,382	28,875	31,915	34,158	36,204	37,833
(a) Other provinces (b) United States (c) Total (a + b) (c) Total (a + b)													
(b) United States 703 703 690 668 624 (c) Total (a + b) 705 706 693 671 627	(a) Other provinces		2	eri	en	c	e	e	4	7		٠	
(c) Total (a + b) 705 706 693 671 627	(b) United States		703	703	. 690	668	6 24	687	703	689	689	689	503
	(c) Total (a + b)		- 1	706	693	671	627	069	707	693	693	693	507
13. Firm energy requirement on the 18,976 21,198 22,332 23,658 24,556 27,072 29 province (11 + 12)		t on the	18,976	21,198	22,332	23,658	24,556	27,072	29,582	32,608	34,851	36,897	38,340

THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

SUMMARY - MANITOBA

		0101	. 30 *	0	0.00	1				FORECA	AST	
		1930	1661	7641	1953	1954	1955	1956	1957	1958	1959	1960
CAPABILITY:	<u>UITY</u> :											
1.	1. Net generating capability:											
	(a) Hydro (b) Thermal	418	413	487	487	522	247	556	556	556 166	556 229	556 292
2.	Receipts of firm power from:											
	(a) Other provinces (b) United States	89 -	77	79	79	80	79	79	89	89	89	89
ů	Deliveries of firm power to:											
	(a) Other provinces	6	6	6	6	13	14	14	14	•	•	٠
	(b) United States	-	-		,	,		-	•	•		•
4.	Net capability (1 + 2 - 3)	487	491	567	580	635	658	652	716	790	853	916
				A	CIUAL					FORECI	AST	
FIRM PO	FIRM POWER PEAK LOAD:											
.5	5. Within province	419	454	094	512	533	594	605	663	705	748	793
. 9	6. Indicated shortage	1		1		t	,	1	XXX	XXX	XXX	XXX
7.	7. Indicated demand within province (5 + 6)	419	454	094	512	533	594	605	663	705	748	793
INDICA.	INDICATED RESERVE: 8. Difference (4 - 7)	+	+ 37	+ 107	+ 68	+ 102	+ 64	+ 47	+ 53	+ 85	+ 105	+ 123
					MILL	IONS O	F KILO	WATT H	OURS			
FIRM EN	FIRM ENERGY REQUIREMENT:											
o,	Firm energy requirement within province	2,216	2,427	2,526	2,670	2,852	3,086	3,295	3,521	3,701	3,931	4,151
10.	Indicated shortage	•	•	1	•	•	•	1	XXX	XXX	XXX	ххх
11.	Indicated firm energy requirement within province (9 + 10)	2,216	2,427	2,526	2,670	2,852	3,086	3,295	3,521	3,701	3,931	4,151
12.	Deliveries of firm energy to:											
	(a) Other provinces(b) United States	79	79		79	114	114	96	96	31	1 1	
	(c) Total (a + b)	79	79	79	79	114	114	96	96	31	•	q
13.	 Firm energy requirement on the province (11 + 12) 	2,295	2,506	2,605	2,749	2,966	3,200	3,389	3,615	3,731	3,931	4,151

SUMMARY - SASKATCHEWAN

TABLE I

CAPABILITY: 1. Net generating capability: (a) Hydro	1930	1661	7661	1933	1954	1955	1956	1057			
APABILITY: 1. Net generating capability: (a) Hydro								1057	11111		
APABILITY: 1. Net generating capability: (a) Hydro		The state of the s						1661	1958	1959	1960
 Net generating capability: (a) Hydro 											
(a) Hydro											
(k) Thomas	85	85	85	85	85	82	82	82	82	82	82
	129	160	172	197	243	257	320	377	209	671	671
2. Receipts of firm power from:											
(a) Other provinces	•		•	٠	,	,		,	1	1	'
	•	ı		ı		1	1	•	,	•	•
3. Deliveries of firm power to:											
(a) Other provinces	89	77	79	79	80	79	99	89	89	89	68
(b) United States	-	'	-	1	-	1	•	1		,	
4. Net capability (1 + 2 - 3)	146	168	178	203	248	260	338	391	523	685	685
				ACTUAL					FOREC	AST	
FIRM POWER PEAK LOAD:											
5. Within province	128	127	144	169	196	227	278	309	339	377	419
6. Indicated shortage	4		•	t	1		1	XXX	XXX	XXX	XXX
7. Indicated demand within province (5 + 6)	128	127	144	169	196	227	278	309	339	377	419
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 18	+ 41	+ 34	+ 34	+ 52	+ 33	09 +	+ 82	+ 184	+ 308	+ 266
				MILL	IONS O	F KILO	WATT	HOURS			
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within province	407	483	583	664	776	813	1.620	1,742	1.865	2 086	576 6
10. Indicated shortage	,	1	1	,	. '			xxx	XXX	XXX	XXX
11. Indicated firm energy requirement within province (9 + 10)	407	483	583	664	776	813	1,620	1,742	1,865	2,086	2,245
12. Deliveries of firm energy to:											
(a) Other provinces(b) United States	200	515	542	559	558	571	522	526	526	561	563
(c) Total (a + b)	200	515	545	559.	558	571	522	526	526	561	563
13. Firm energy requirement on the province (11 + 12)	406	866	1,125	1,223	1,334	1,384	2,142	2,268	2,391	2,647	2,808

SUMMARY - ALBERTA

	1950	1951	1952	1053	1954	1055	1056		FOREC	AST	
				2007	1007	0000	222	1957	1958	1959	1960
CAPABILITY:											
1. Net generating capability:											
(a) Hydro (b) Thermal	83	162	162	162	202	220	338	237	237	317	317
2. Receipts of firm power from:											•
(a) Other provinces		•		1	4	1	4	en	2	,	•
3. Deliveries of firm offer to.	•		•		5	•	1	1		•	•
	۳ I	٠, ١	7	CO #	1 1	en 1		1 1	1 1	s t	2 1
4. Net capability (I + 2 - 3)	188	266	274	341	400	455	562	626	722	825	1,005
				ACTUA	L				FOREC	AST	
FIRM POWER PEAK LOAD: 5. Within province	176	220	233	284	313	391	451	526	909	697	801
6. Indicated shortage	ı	,		1	•	1	t	XXX	XXX	ххх	ххх
7. Indicated demand within province (5 + 6)	176	220	233	284	313	391	451	526	909	697	801
INDICATED RESERVE: 8. Difference (4 - 7)	+ 12	97 +	+ 41	+ 57	+ 87	+ 64	+ 111	+ 100	+ 116	+ 128	+ 204
				MIL	LIONS O	F KILO	WATT H	OURS			
831											
9. Firm energy requirement within province	1,023	1,114	1,167	1,372	1,581	1,859	2,180	2,444	2,795	3,193	3,662
10. Indicated shortage	-	4	1	•	•		1	ххх	xxx	XXX	XXX
11. Indicated firm energy requirement within province (9 + 10)	1,023	1,114	1,167	1,372	1,581	1,859	2,180	2,444	2,795	3,193	3,662
12. Deliveries of firm energy to:											
(a) Other provinces (b) United States	14	20	30	1	1 1	1 1	t t	1 1		1 1	1 1
(c) Total (a + b)	14	20	30	9	•		1	1	1		
 Firm energy requirement on the province (11 + 12) 	1,037	1,134	1,197	1,378	1,581	1,859	2,180	2,444	2,795	3,193	3,662

- 22 -

SUMMARY - BRITISH COLUMBIA

TABLE I

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	1950	1951	1952	1953	1954	1955	1956		FOREC	AST	
								1957	1958	1959	1960
CAPABILITY:											
1. Net generating capability:											
(a) Hydro (b) Thermal	852 96	908	969	1,003	1,578	1,614	1,866	2,323	2,481	2,708	2,790
2. Receipts of firm power from:									4	777	177
(a) Other provinces	m	80	7	00		٣	1	,		1	2
	•	•				•	52	1	,	1	1
3. Deliveries of firm power to:											
(a) Other provinces(b) United States	30	30	30	30	30	20	4 -	en 1	2 .		1 1
4. Net capability (1 + 2 - 3)	921	066	1,060	1,109	1,674	1,730	2,067	2,519	2,801	3,030	3,114
				ACTUAL					FOREC	AST	
FIRM POWER PEAK LOAD:											
	799	198	932	1,010	1,275	1,386	1,724	1,963	2,247	2,480	2,624
6. Indicated shortage	1	•	٠	12		4,	-	XXX	ххх	XXX	XXX
7. Indicated demand within province (5 + 6)	799	861	932	1,022	1,275	1,386	1,725	1,963	2,247	2,480	2,624
INDICATED RESERVE: 8. Difference (4 - 7)	+ 122	+ 129	+ 128	+ 87	+ 399	+ 344	+ 342	+ 556	+ 554	+ 550	067 +
				MILL	OSNOI	F KILO	WATT H	OURS			
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within province	4,523	4,741	4,979	5,466	6,414	8,011	9,802	12.248	13.734	15, 995	15.511
10. Indicated shortage	š	4	1				•	XXX	XXX	XXX	Ħ
 Indicated firm energy requirement within province (9 + 10) 	4,523	4,741	4,979	5,466	6,414	8,011	9,802	12,248	13,734	15,995	115,511
12. Deliveries of firm energy to:											
(a) Other provinces(b) United States	184	184	184	184	10	10	10	n.	Tr.	п.	12
(c) Total (a + b)	184	184	184	184	194	132	10	11	111	11	12
13. Firm energy requirement on the province (11 + 12)	4,707	4,925	5,163	5,650	6,608	8,143	9,792	12,237	13,723	15,984	15,499

SUMMARY - YUKON AND NORTH WEST TERRITORIES

Thousands of Kilowatts

	1950	1951	1952	1953	1954	1955	1956		FORECA	LSI	
								1957	1958	1959	1960
CAPABILITY:							-				
1. Net generating capability;											
(a) Hydro (b) Thermal	21	21	24	24	24	22	22	21	35	37	37
2. Receipts of firm power from:						•	4	4	4	4	4
	,	1	,	1	ı			,	:		
(b) United States	٠	1	1	1	1	•					1 1
3. Deliveries of firm power to:											
(a) Other provinces	,	٠	1	,			,	ı	t	1	
(b) United States			•	1	•	1	1	•			1
4. Net capability (1 + 2 - 3)	21	21	24	24	24	22	23	22	36	38	38
				ACTUAL					FORECA	ST	
FIRM POWER PEAK LOAD:											
5. Within province	14	14	16	17	18	19	19	20	31	33	34
6. Indicated shortage	•		•	ŧ	,	ŧ	ı	XXX	ххх	ХХХ	XXX
7. Indicated demand within province (5 + 6)	14	14	16	17	18	19	19	20	31	33	34
INDICATED RESERVE: 8. Difference (4 - 7)	+ 7	+ 7	«» +	+ 7	9 +	en +	4 +	+ 5	+ 5	+	+
				MILL	IONS OI	F KILO	WATTH	OURS			
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within province	67	79	99	œ	o	9	αο	Ö	211	15%	O L
10. Indicated shortage	; '	'	3 '	3 '	S ,	2 1	2 +	XXX	XXX	*CT XXX	XXX
 Indicated firm energy requirement within province (9 + 10) 	67	64	99	83	89	96	98	66	113	154	158
12. Deliveries of firm energy to:											
(a) Other provinces (b) United States		1 1					1 1		()		f t
(c) Total (a + b)		à	1	1	-	1		1		1	5
13. Firm energy requirement on the province (11 + 12)	19	99	99	83	89	96	86	66	113	154	158

TABLE II NET GENERATING CAFABILITY WITHIN PROVINCES*

	1952 -	48.0	50.0	110.7	124.7	70.0	104.1	70.6	193.0	258.4	187.3	58.3	101.0
PERCENTAGE CHANGE	1956-	22.3	50.0	51.1	61.9	41.6	45.8	6.04	87.3	80.8	54.1	65.2	47.6
PERCENT	1952-	21.0	0.0	39.5	38.8	20.1	43.9	21.1	56.4	98.6	86.4	- 4.2	36.2
	1960	296	27.	571	463	8,340	6,657	848	753	1,007	3,111	38	22,111
CAST	1959	296	26	542	419	7,790	6,444	785	753	825	3,030	38	20,948
FORE	1958	262	26	433	375	6,804	5,857	722	591	720	2,803	36	18,629
	1957	247	26	431	322	6,322	4,916	662	459	623	2,522	22	16,552
	1956	242	18	378	286	5,890	4,565	602	402	558	2,019	23	14,983
	1955	223	18	384	256	5,619	4,488	593	339	458	1,747	22	14,147
	1954	223	18	318	244	5,413	4,088	568	328	396	1,708	24	13,328
	1953	217	18	300	244	5,335	3,493	510	282	349	1,131	24	11,903
	1952	200	100	271	206	4,905	3,262	164	257	281	1,083	24	11,004
	1921	200	18	248	198	4,613	2,824	423	245	271	1,015	21	10,076
	1950	188	10	209	192	4,396	2,566	428	214	191	948	21	9,363
	PROVINCE	Newfoundland (including Labrador)	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada

* Hydro plus thermal (Table I, item la + 1b)

THIRD ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE III

FIRM POWER PEAK LOAD WITHIN PROVINCES*

PROVINCE									FOREC	RECAST		PERCEI	PERCENTAGE CHANGE	
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1952- 1956	1956- 1960	1952 - 1960
Newfoundland (including Labrador)	177	182	186	195	202	207	224	233	247	265	274	20.4	22.3	47.3
Prince Edward Island	œ	œ	6	10	11	12	12	13	15	17	19	33.3	58.3	111.1
Nova Scotia	167	187	215	239	248	278	301	330	364	397	432	40.0	43.5	100.9
New Brunswick	177	184	193	201	210	236	243	269	322	350	371	25.9	52.7	92.2
Quebec	3,174	3,462	3,752	3,955	4,092	4,411	4,995	5,308	5,647	6,309	6,604	33.1	32.2	76.0
Ontario	3,291	3,611	3,804	4,029	4,261	4,775	5,064	5,603	6,004	6,375	699'9	33.1	31.7	75.3
Manitoba	419	454	097	512	533	294	605	663	705	148	793	31.5	31.1	72.4
Saskatchewan	128	127	144	169	196	227	278	309	339	377	419	93.1	50.7	191.0
Alberta	176	220	233	284	313	391	451	526	909	697	801	93.6	9.77	243.8
British Columbia	662	861	932	1,022	1,275	1,386	1,725	1,963	2,247	2,480	2,624	85.1	52.1	181.5
Yukon and N.W.T.	14	14	16	17	18	19	19	20	31	33	. 34	18.8	78.9	112.5
Canada	8,530	9,310	9,944	10,633	11,359	12,536	13,917	15,237	16,527	18,048	19,040	40.0	36.8	91.5

^{*} Indicated Firm Demand (Table I, item 7)

TABLE IV

FIRM ENERGY REQUIREMENT WITHIN PROVINCES*
Millions of Kilowatt Hours

2 E									FORE	CAST		PERCE	PERCENTAGE CHANGE	
-	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1952-	1956-	1952-
ri .	1,058	1,040	1,157	1,190	1,234	1,299	1,374	1,325	1,425	1,529	1,582	18.8	15.1	36.7
	31	34	37	41	949	51	53	09	67	75	83	43.2	56.6	124.3
	891	1,027	1,122	1,211	1,277	1,357	1,486	1,616	1,742	1,880	2,021	32.4	36.0	80.1
	961	1,002	1,024	1,044	1,189	1,237	1,262	1,392	1,778	1,921	2,018	23.2	59.9	97.1
20,	20,565	23,404	24,506	26,712	27,955	29,841	32,634	35,472	38,448	40,671	45,101	33.2	38.2	84.0
18,	18,271	20,492	21,639	22,987	23,929	26,382	28,875	31,915	34,158	36,204	37,833	33.4	31.0	74.8
2,	2,216	2,427	2,526	2,670	2,852	3,086	3,295	3,521	3,701	3,931	4,151	30.4	26.0	64.3
	407	483	583	799	9//	813	1,620	1,742	1,865	2,086	2,245	177.9	38.6	285.1
H.	1,023	1,114	1,167	1,372	1,581	1,859	2,180	2,444	2,795	3,193	3,662	86.8	. 0.89	213.8
4,	4,523	4,741	4,979	5,466	6,414	8,011	9,802	12,248	13,734	15,995	115,511	6.96	58.2	211.5
	67	79	99	83	68	96	86	66	113	154	158	48.5	61.2	139.4
50,0	50,013 5	55,828	58,806	63,440	67,342	74,032	82,679	91,834	99,826 1	107,639	114,365	40.6	38.3	94.5

* Table I item 11.

TABLE V

INDICATED RESERVE*

									FOREC	AST		PERCEN	PERCENTAGE CHANGE	
ı	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1952- 1956	1956-	1952- 1960
Newfoundland (including Labrador)							.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							
Gross capability Total firm demand on	188	200	200	217	223	223	242	247	262	296	296	21.0	22.3	48.0
the province	177	182	186	195	202	207	230	239	253	271	280	23.7	21.7	50.5
Indicated reserve (1-2) Indicated reserve ex-	11	18	14	22	21	16	12	∞	6	25	16	XXX	xxx	xxx
pressed as a % of total firm demand	6.2	6.6	7.5	11.2	10.4	7.7	5.2	3.3	3.6	9.2	5.7	XXX	xxx	XXX
Prince Edward Island														
Gross capability Total firm demand on	10	18	18	18	18	18	18	26	26	26	27	0.0	50.0	50.0
the province	00	00	6	10	11	12	12	13	15	17	19	33.3	58.3	111.1
Indicated reserve (1-2) Indicated reserve expressed as a % of total	2	10	6	ω	7	9	9	13	11	6	σ0	xxx	xxx	XXX
firm demand	25.0	125.0	100.0	80.0	63.6	50.0	50.0	100.0	73.3	52.9	42.1	XXX	XXX	XXX
Nova Scotia														
Gross capability Total firm demand on	209	248	271	300	318	384	378	431	433	542	571	39.5	51.1	110.7
the province	169	189	217	241	250	280	303	332	366	400	435	39.6	43.6	100.5
Indicated reserve (1-2)	40	59	54	59	89	104	75	66	19	142	136	XXX	XXX	ххх
pressed as a % of total														
firm demand	23.7	31.2	24.9	24.5	27.2	37.1	24.8	29.8	18.3	35.5	31.3	ххх	XXX	XXX
New Brunswick	3		6											
Total firm demand on	194	200	208	246	246	260	291	328	381	427	471	38.5	61.8	124.0
the province	182	188	200	207	215	241	248	277	330	358	379	22.5	52.7	87.0
Indicated reserve (1-2) Indicated reserve ex-	12	12	00	39	31	19	43	51	51	69	92	XXX	XXX	ххх
pressed as a % of Total	9.9	4.9	0 4	α α	1 7 7	0	7	0	L.	0	· ·			
			2	10.0	14.4	(:)	C:/7	10.4	15.5	19.3	24.3	XXX	XXX	XXX

* Gross capability (Table 1, item 1 * 2) less total firm demand on the provinces (Table 1, item 7 + 3).

TABLE V

INDICATED RESERVE*

									FOREC	AST		PERCEN	PERCENTAGE CHANGE	
	1950	1921	1952	1953	1954	1955	1956	1957	1958	1959	1960	1952- 1956	1956- 1960	1952-
Quebec														
1. Gross capability 2. Total firm demand on	4,397	4,614	4,906	5,336	5,418	5,625	5,901	6,329	6,811	7,797	8,347	20.3	41.5	70.1
	3,941	4,231	4,521	4,724	4,842	5,163	5,709	5,936	6,341	7,025	7,320	26.3	28.2	61.9
3. Indicated reserve (1-2)	456	383	385	612	576	462	192	393	470	772	1,027	XXX	XXX	XXX
	11.6	9.2	8.6	13.1	12.0	9.0	3.4	9.9	7.4	11.0	14.0	XXX	XXX	XXX
Ontario 1. Gross capability 2. Total firm demand on	3,307	3,568	4,007	4,239	4,820	5,229	5,267	5,534	6,530	7,141	7,356	31.4	39.7	83.6
	3,377	3,697	3,890	4,115	4,347	4,861	5,151	5,690	6,091	6,462	6,711	32.4	30.3	72.5
3. Indicated reserve (1-2)	- 70	- 129	117	124	473	368	116	- 156	684	629	645	XXX	XXX	xxx
pressed as a % of total firm demand ==	1	'	3.1	3.1	11.1	7.7	2.3	4	7.2	10.5	9.6	XXX	XXX	XXX
Manitoba 1. Gross capability 2. Total firm demand on	967	200	576	589	648	672	999	730	790	853	916	15.6	37.5	15.9
	428	463	694	521	979	809	619	677	705	748	793	32.0	28.1	69.1
3. Indicated reserve (1-2)	89	37	107	89	102	79	47	53	85	105	123	XXX	XXX	XXX
pressed as a % of total firm demand	15.9	8.0	22.8	13.1	18.7	10.5	7.6	7.8	12.0	14.0	15.5	xxx	XXX	XXX
Saskatchewan														
1. Gross capability 2. Total firm demand on	214	245	257	282	328	339	705	459	591	753	753	56.4	87.3	193.0
	196	204	223	248	276	306	342	377	407	445	487	53.4	42.4	118.4
 Indicated reserve (1-2) Indicated reserve ex- 	. 18	41	34	34	52	33	09	82	184	308	266	XXX	ххх	XXX
pressed as a % of total firm demand	20.0	25.4	18.8	16.8	21.3	12.0	17.5	21.8	45.2	69.2	54.6	XXX	XXX	XXX

* Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table I, item 7 + 3)

TABLE V

INDICATED RESERVE*

									9	6		The state of the s		
									4	CAOL		1050	PERCENTAGE CHANGE	1000
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1956	1960	1960
Alberta														
1. Gross capability 2. Total firm demand on	191	271	281	349	400	458	562	626	722	825	1,007	100.0	79.2	258.4
	179	225	240	292	313	394	451	526	909	697	803	87.9	78.0	234.6
3. Indicated reserve (1-2) 4. Indicated reserve expressed as a % of total	12	9†	41	57	87	79	111	100	116	128	204	XXX	XXX	XXX
firm demand	6.7	20.4	17.1	19.5	27.8	16.2	24.6	19.0	19.1	18.4	25.4	XXX	ххх	XXX
British Columbia														
1. Gross capability 2. Total firm demand on	951	1,020	1,090	1,139	1,708	1,750	2,071	2,522	2,803	3,030	3,114	0.06	50.4	185.7
	829	891	962	1,052	1,309	1,406	1,729	1,966	2,249	2,480	2,624	79.6	51.9	172.8
3. Indicated reserve (1-2)	122	129	128	87	399	344	342	556	554	550	065	XXX	XXX	XXX
	14.7	14.5	13.3	60	30.5	2.4.5	o o	28 3	3 7 6	0000	. 7 81	200	2000	*******
н					0.00	6.1.7	200	5.07	0.47	7.77	10.1	XXX	XXX	XXX
Yukon and N.W.T. 1. Gross capability 2. Total firm demand on	21	21	24	24	24	22	23	22	36	38	38	80.3	72.7	58.3
the province	14	14	16	17	18	19	19	20	31	33	34	18.8	78.9	112.5
3. Indicated reserve (1-2)	7	7	œ	7	9	m	7	2	5	5	4	XXX	XXX	XXX
firm demand	50.0	50.0	50.0	41.2	33.3	15.8	21.1	10.0	16.1	15.2	11.8	XXX	XXX	XXX
Canada	3000	1000	1100	100	0.00	L 00 P	0 F	001			1			
	7,304	10,090	17,021	17,611	13,35/	14,185	15,0/2	16,588	18,668	20,990	22,156	36.7	47.0	100.9
Canada	8,706	9,485	10,122	10,810	11,535	12,702	14,064	15,387	16,677	18,198	19,145	38.9	36.1	89.1
3. Indicated reserve (1-2) 4. Indicated reserve ex-	678	613	905	1,117	1,822	1,483	1,008	1,201	1,991	2,792	3,011	xxx	xxx	xxx
pressed as a % of total firm demand	7.8	6.5	8.9	10.3	15.8	11.7	7.2	7.8	11.9	15.3	15.7	XXX	XXX	XXX
The state of the s														

* Gross capability (Table 1, item 1 + 2) less total firm demand on the Provinces (Table I, item 7 + 3)

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The function of an Area Representative is primarily to act as the direct liaison between the company representatives in his area and the Dominion Bureau of Statistics on all matters relating to the power survey. For this reason Area Representatives must have the complete co-operation of Company representatives in securing the information required for the power survey.













Fourth ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

March, 1958

DOMINION BUREAU OF STATISTICS

Public Finance and Transportation Division
Transportation and Public Utilities Section



DOMINION BUREAU OF STATISTICS

Public Finance and Transportation Division Transportation and Public Utilities Section

Fourth

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March, 1958

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TABLE OF CONTENTS

		Page
Introductio	on Control of the Con	1
Review of S	urvey Results	2
Definitions		5
Chart A:	Net Generating Capability within Canada, 1950 through 1961	6
Chart B:	Net Capability and Firm Demand within Canada, 1950 through 1961	7
Chart C:	Net Generating Capability within Provinces, 1950 through 1961	9
Chart D:	Net Capability and Firm Demand within Provinces, 1950 through 1961	10
Chart E:	Firm Energy Requirement within Canada, 1950 through 1961	12
Table 1:	Summary by Provinces and Canada, 1950, 1952 through 1961	13
Table II:	Net Generating Capability within Provinces, 1950, 1952 through 1961	25
Table III:	Firm Power Peak Load Within Provinces, 1950, 1952 through 1961	26
Table IV:	Firm Energy Requirement within Provinces 1950, 1952 through 1961	27
Table V:	Indicated Reserve, 1950, 1952 through 1961	28
Canadian Ele	ectrical Association Policy Sub-Committee	31
Surveys Sub-	-Committee	32



Introduction

This report presents the results of the fourth annual Electric Power Survey of Capability and Load which was conducted in March 1958 by the Dominion Bureau of Statistics in cooperation with the Canadian Electrical Association. The Electric Power Survey embraces all producers of electric energy in Canada which generate 10,000,000 kilowatt hours or more per annum. The 1958 report is based on returns from 128 companies, half of which are utilities and the other half industrial establishments which generate power primarily for own use. As these 128 producers account for approximately 99 per cent of total generation in Canada, figures presented in this report may be regarded as being representative of the entire industry.

The statistics presented are for the years 1950, and 1952 - 1961 inclusive, the latter four years on a forecast basis. Capability and load figures are based on the situation as it existed at the time of each company's annual firm power peak load, load being calculated in terms of contractual commitments for firm power.

Generating capability is the maximum output that can be maintained at time of annual firm power peak load. Net generating capability refers to the amount left after power used in station service is deducted. It is calculated on the basis of actual operating experience assuming all equipment in working order and available for use. Net generating capability should not be construed as representing installed capacity a term used in reference to the name plate ratings of generating equipment as designated by the manufacturers.

The power situation in any province or for the country as a whole can be presented in several ways. Two of these are contained in the report and are based on the demand within the province (Table 1) and the demand on the province (Table V). In each case the appropriate capability is also shown. Demand within the province is related to net capability which means net generating capability plus purchases less deliveries outside the province.

Presenting the power situation within Canada and within the individual provinces provides a measure of the growth of the industry within geographic areas and is of interest in measuring the contribution of the industry to the economic growth of the country as a whole. Demand on the province, however, is related to gross capability which is generating capability plus purchases outside the province and is of interest primarily from a utility point of view.

Some care must be exercised in the interpretation of these data. For example, the difference between gross capability and total firm demand is an indication of available reserves of power. Since power producers are not, however, all fully interconnected, reserves of power cannot always be completely utilized.

Review of Survey Results

Net Generating Capability: Total net generating capability in Canada rose 9.9 per cent between 1956 and 1957 to 16,469,000 kilowatts from 14,983,000. Further annual increases totalling 42.6 per cent over the next four years are expected to result in a net generating capability in 1961 of 23,484,000 kilowatts, The proportion of thermal generation to the total is expected to rise from 14.1 per cent in 1957 to 21.1 per cent in 1961.

Companies reporting for the first time this year accounted for 134,000 kilowatts or .8 per cent of total 1957 net generating capability.

Firm Power Peak Load: Firm power peak load within Canada stood at 14,925,000 kilowatts in 1957, an increase of 7.2 per cent over the 1956 total of 13,917,000. The forecast for 1961 is 19,526,000 kilowatts, an estimated rise of 30.8 per cent

Indicated Reserve: The indicated reserve for Canada rose to 1,394,000 kilowatts from 975,000 in 1956. By 1961, it will have risen to 3,851,000 kilowatts, a reserve equivalent to 16.4 per cent of net capability as compared with this year's 8.5 per cent.

Firm Energy Requirement: The increase over 1956 was not as large as forecast one year ago. A gain of 5.0 per cent raised the firm energy requirement to 66,-333,000,000 kilowatt hours, an amount considerably less than the 91,834,000,000 kilowatt hours forecast. Firm energy requirement is now expected to increase to 114,478,000,000 kilowatt hours by 1961, a level approximating that forecast for 1960 one year ago.

Table 1 - Summary (Pages 13 to 24): This table presents capability, firm power peak load, indicated reserve and firm energy requirement summarized for Canada and for each of the provinces.

Table 2 - Net Generating Capability Within Provinces (Page 25): Net generating capability is presented in this table by province. The growth over the last four years for most provinces has been quite impressive, the gain of 107.8 per cent in British Columbia being the largest. Between 1953 and 1957 the growth in Canada as a whole amounted to 4,566,000 kilowatts, a gain of 38.4 per cent. During the next four years an indicated growth of 42.6 per cent will add 7,015,000 kilowatts to net generating capability resulting in an overall increase for the period 1953-1961 of 97.3 per cent. Growth in the individual provinces will during the period vary from a low of 41.5 per cent in Newfoundland to 198.1 per cent in British Columbia.

Table III - Firm Power Peak Load Within Provinces (Page 26): Actual and fore-cast data on firm power peak load indicate an increase within Canada between 1953 and 1961 of 8,896,000 kilowatts or 83.7 per cent. Whereas the increase in demand between 1953 and 1957 amounted to 4,292,000 kilowatts or 40.4 per cent the increase estimated for the next four years is 4,604,000 kilowatts or 30.8 per cent.

Table IV - Firm Energy Requirement Within Provinces (Page 27): Kilowatt hours needed to meet the firm energy requirement within the country totalled

86,333,000,000 in 1957, an increase of 22,893,000,000 or 36.1 per cent over the 1953 total of 63,440,000,000. By 1961 the firm energy requirement is expected to reach 114,476,000,000 kilowatt hours following a further four-year increase of 32.6 per cent.

Table V - Indicated Reserve (Page 28): This table shows the relationship between the demand for power and the ability to meet it in each of the provinces and in Canada as a whole. Demand on the province consists of firm power peak load within the province plus any indicated shortage or rejected load plus firm power deliveries outside the province. Gross capability consists of net generating capability (hydro and thermal) within the province plus purchases of firm power under firm obligation from sources outside the province. The difference between gross capability and firm demand is the indicated reserve, and this, expressed as a percentage of total firm demand, can be used as a measurement of the industry's ability to satisfy demand and meet contingencies.

For Canada as a whole the reserve is expected to rise from a low of 6.9 per cent in 1956 to a high of 23.2 per cent in 1960. In 1957 it was 1,394,000 kilowatts or 9.2 per cent. Reserves for individual provinces in 1957 varied from a high of 78.6 per cent in Prince Edward Island to a low of 2.5 per cent in Ontario. Since not all systems are fully interconnected, it should be remembered that reserves of power cannot always be completely utilized.

Charts: On pages 6 to 12, five charts are presented to show results of the survey of the electric power industry in Canada in graphic form.

<u>Chart A - Net Generating Capability Within Canada</u> (Page 6): This chart portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important. Total thermal generation is expected to increase from 1,720,000 kilowatts or 14.5 per cent of the net generating capability within Canada in 1953 to 4,959,000 kilowatts or 21.1 per cent in 1961.

Chart B - Net Capability and Firm Demand Within Canada (Page 7): Chart B provides an indication of the reserves available to meet firm demand for electric power within Canada.

Chart C - Net Generating Capability Within Provinces (Pages 8 - 9): This chart presents for each of the provinces, the information contained in Chart A. It illustrates the comparative importance of thermal and hydro generation within provinces.

Chart D - Net Capability and Firm Demand Within Provinces (Pages 10 - 11): The fourth chart provides a graphic indication of the year to year ability of each of the provinces to meet its firm demand for electric power.

Chart E - Firm Energy Requirement Within Canada (Page 12): This is an illustration of the growth in Canadian firm energy requirements by years for the period 1950 to 1961.



DEFINITIONS

NET GENERATING CAPABILITY

The maximum net kilowatt output (after station service) available from the generating facilities of the company, utility or system with all equipment available, at the time of the annual firm power peak load, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

FIRM POWER

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

NET CAPABILITY

The sum of net generating capability and purchases of firm power under firm obligation less deliveries of firm power under firm obligation.

FIRM OBLIGATIONS

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis.

FIRM POWER PEAK LOAD

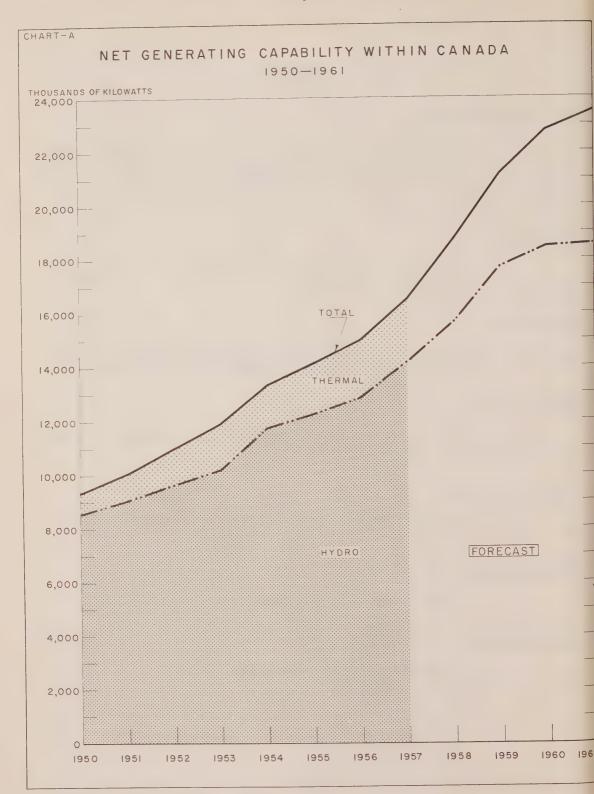
The annual firm power maximum average net kilowatt load of one hour duration within the company, utility or system.

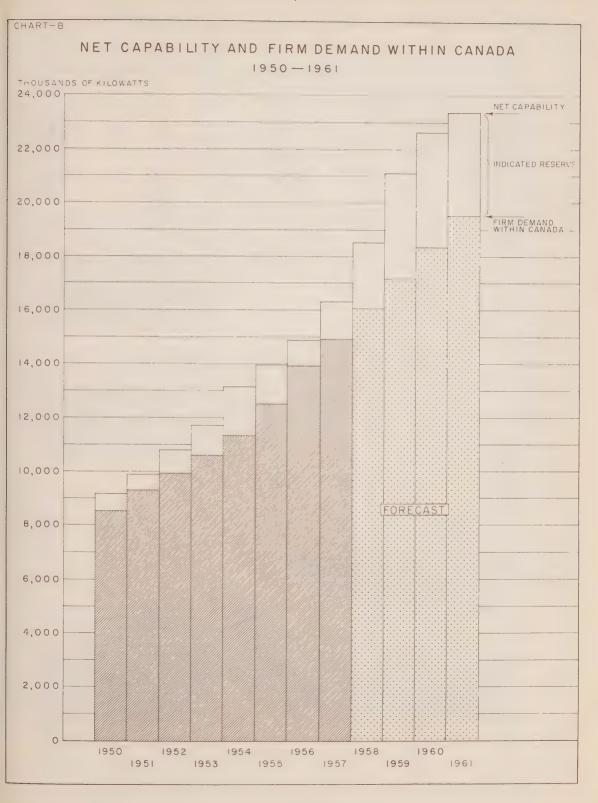
INDICATED DEMAND

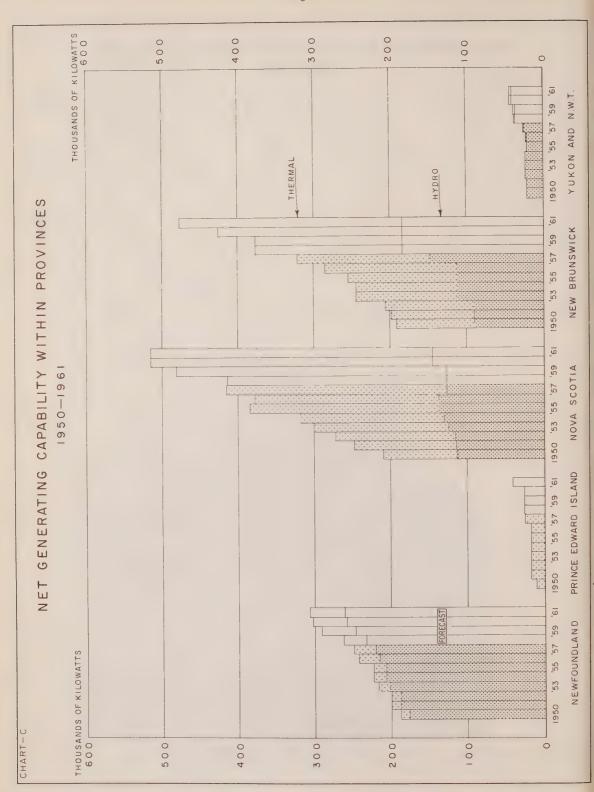
The sum of firm power peak load and indicated shortage.

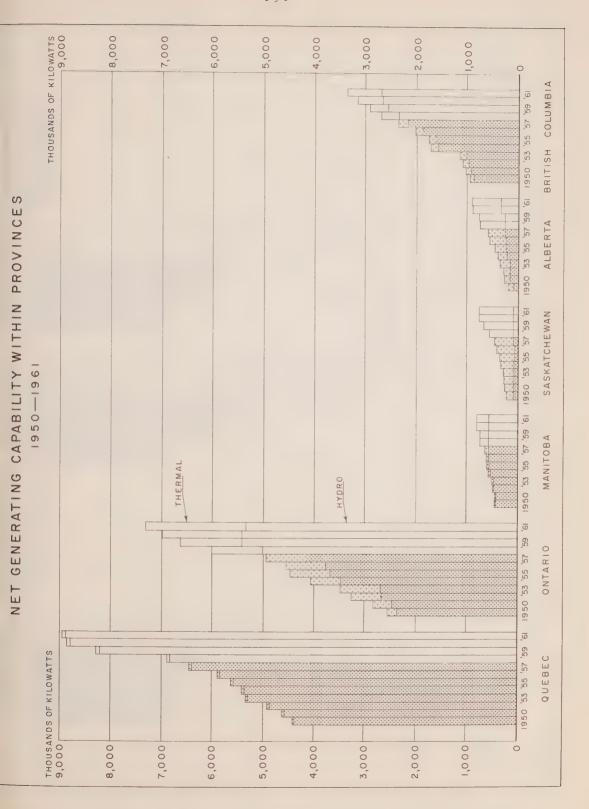
INDICATED RESERVE

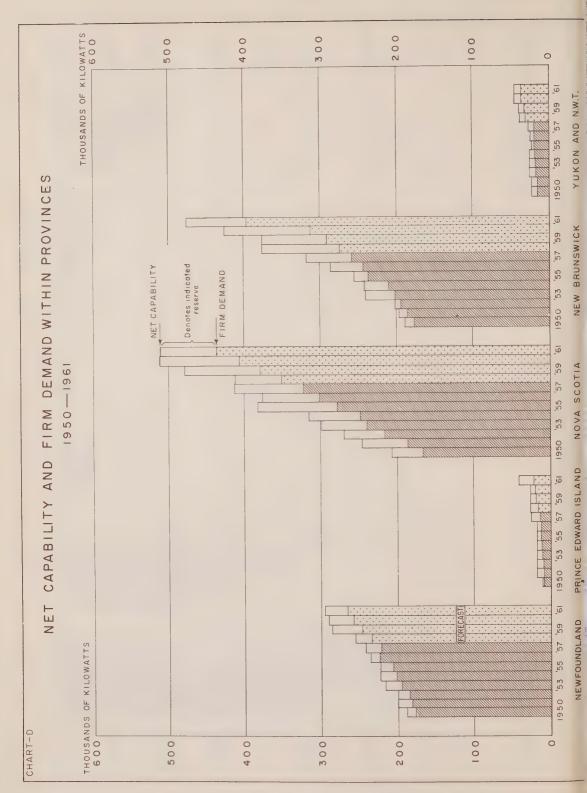
Net capability less indicated demand (+ or -).

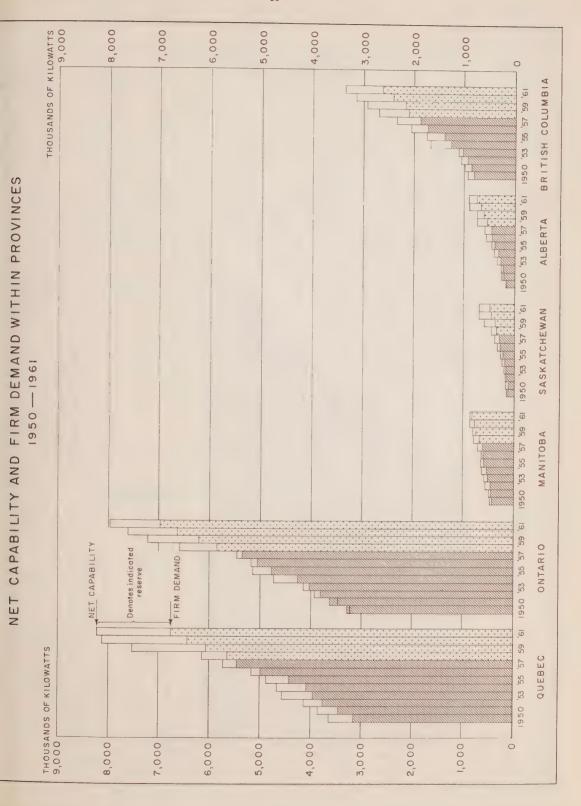












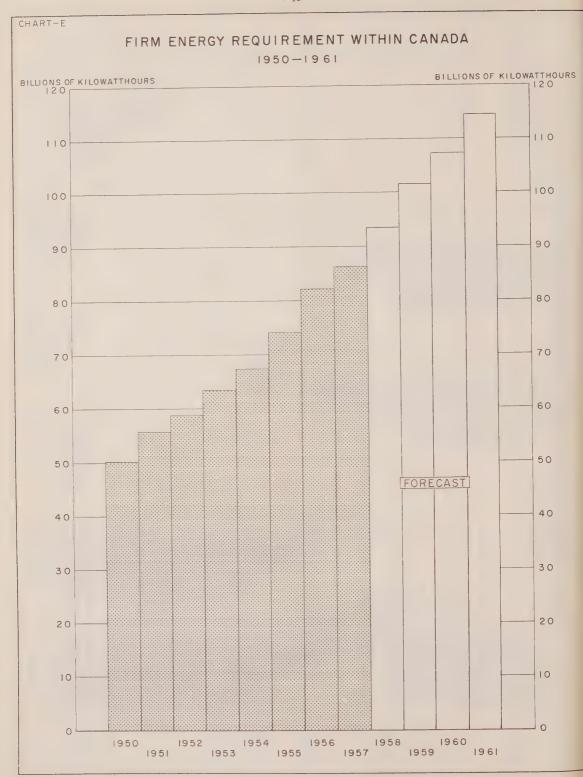


TABLE I

SUMMARY - CANADA*

Thousands of kilowatts

	1950	1952	1953	1954	1955	1956	1957		FOR	ECAST	
CAPABILITY:							1004	1958	1959	1960	1961
1. Net generating capability:											
(a) Hydro (b) Thermal	8,575	9,673	10,183	11,719	12,211	12,841	14,143	15,653	17,702	18,465	18,525
2. Receipts of firm power from:					0000	747 67	7,320	3,052	3,464	4,323	4,959
(a) Other provinces(b) United States		1 1) (1 <	8 1.	1 1	,	(1	,
3. Deliveries of firm power to:				‡	C	26		1	1		1
	176	178	- 171	176	166	147	150	150	150	149	104
4. Net capability (1 + 2 - 3)	9,187	10,826	11,726	13,156	13,986	14,892	16,319	18,555	21,016	22,639	23,380
					ACTUA	A L			Tr.	<	
FIRM POWER PEAK LOAD:									4	9	
	8,313	9,941	10,553	11,355	12.472	13.870	17, 023	16 063	1		
6. Indicated shortage	217	e	80	4	79	47	2 2	10,043	17,146	18,345	19,529
7. Indicated demand within Canada (5 + 6)	8,530	9,944	10,633	11,359	12.536	13 017	17, 025	070 31			
INDICATED RESERVE:						17060	77,677	10,043	1/,146	18,345	19,529
8. Difference (4 - 7)	+ 657	+ 882	+ 1,093	+ 1,797	+ 1,450	+ 975	+ 1,394	+ 2,512	+ 3,870	+ 4,294	+ 3,851
				IIW	LLIONS	OF KIL	LOWATT	HOURS			
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within Canada 10. Indicated shortage	49,635	58,760	63,437	67,331	73,754	80,679	85,697	93,682	101,635	108,236	114,478
ll. Indicated firm energy requirement within Canada $(9+10)$	50,013	58.806	63 440	67 273	7.				4	1	'
12. Deliveries of firm energy to:			01110	245	74,132	82,225	86,333	93,682	101,635	108,236	114,478
(a) Other provinces (b) United States	1,418	1,398	1,378	1,357	1,332	1,226	1,172	1,160	1.157	751	790
	1,418	1,398	1,378	1,357	1,332	1,226	1,172	1,160	1.157	1.154	100
 Firm energy requirement on Canada + 12) 	51,431	60,204	64,818	68,699	75.464	83.451	87 505	0,00,0	000		
				20000	+0+60/	105,00	67,505	94,842	102,792	109,390	-

^{*} Revised figures for earlier years are explained on pages 18, 19 and 21.

TABLE I

SUMMARY - NEWFOUNDIAND (including Labrador)

										FOREC	AST	
		1950	1952	1953	1954	1955	1956	1957	1958	69		1961
CAPABILITY:												
 Net generating capability: (a) Hydro (b) Thermal 		176 12	188	202	207 16	207	215	220	233	247 45	258 45	261 46
2. Receipts of firm power from:	п:											ı
(a) Other provinces(b) United States		1 1	1 1	1 1	1 1		1 1	1 1	1 1	ı t		ı
3. Deliveries of firm power to:	: 0			1			0	9	9	9	13	13
(a) Other provinces(b) United States		1 1	1 1		1	ı	1	1	1		6	1
4. Net capability (1 + 2 - 3)		188	200	217	223	223	236	243	256	286	290	294
					ACTUA	L				FOREC	AST	14 -
FIRM POWER PEAK LOAD: 5. Within province		177	186	195	201	206	222	222	234	247	258	266
6. Indicated shortage		1	1	1	1	1	2	1	1			
7. Indicated demand within province (5 + 6)	covince	177	186	195	202	207	224	222	234	247	258	266
INDICATED RESERVE: 8. Difference (4 - 7)		+ 11	+ 14	+ 22	+ 21	+ 16	+ 12	+ 21	+ 22	+ 39	+ 32	+ 28
					MIL	LIONS	OF KIL	OWATT	HOURS			
FIRM ENERGY REQUIREMENT: 9. Firm energy requirement within province	thin province	1,058	1,157	1,190	1,225	1,289	1,374	1,333	1,461	1,526	1,616	1,725
	uirement	1,058	1,157	1,190	1,234	1,299	1,374	1,333	1,461	1,526	1,616	1,725
12. Deliveries of firm energy to: (a) Other provinces (b) United States	to:	1.3	\$ 1	1 1	1 1	1-1	31	- 46	51	57	93	93
(c) Total (a + b)		1	0			1	31	95	51	57	93	93
13. Firm energy requirement on the narvaince (11 + 12)	a the	1,058	1,157	1,190	1,234	1,299	1,405	1,379	1,512	1,583	1,709	1,818

TABLE I

SUMMARY - PRINCE EDWARD ISLAND

Thousands of kilowatts

	1950	1952	1953	1954	1955	1956	1957		FOR	ECAST	
CAPABILITY:								1958	1959	1960	1961
1. Net generating capability:											
(a) Hydro (b) Thermal	10	18	: 01	1 00	1 0	1 0	1 1	1	•	1	,
2. Receipts of firm power from:			2	2	07	TQ	52	26	26	26	41
(a) Other provinces (b) United States		1 1	ı	1	i	1	1	'	1	1	ı
3. Deliveries of firm power to:			•	ı		1	1	1	ı		1
(a) Other provinces(b) United States	1 1	1 1	1 1		1 1	1 1		, ,	1 1	1	1
4. Net capability (1 + 2 - 3)	10	18	18	18	18	18	25	26	26	26	41
				ACTUA	I				E C	0 4 0	
FIRM POWER PEAK LOAD:									4		
Within province	∞	6	10	11	12	12	14	7	OF	Ç	;
Indicated shortage	,	1	1	1	,	'		2 1	01	19	21
Indicated demand within province (5 + 6)	∞	6	10	11	C.F.		:				•
INDICATED RESERVE:					77	71	Td.	16	18	19	21
Difference (4 - 7)	+ 2	6 +	× +	L +	9 +	9 +	+ 11	+ 10	∞ +	+ 7	+ 20
				MILI	LIONS O	F KIL	OWATT	HOURS			
FIRM ENERGY REQUIREMENT: 9. Firm energy requirement within province	31	37	41	97	51	53	09	63	62	7,1	
Indicated shortage	r	,	1	ı	,	1	} ') i	t '	08
Indicated firm energy requirement within province $(9 + 10)$	31	37	41	97	51	53	909	53	-7	2	
Deliveries of firm energy to:								3	/0	14/	08
(a) Other provinces (b) United States			1		ı	ı	,		1	,	,
(c) Total (a + b)					4	,		1			•
			1	1	1	1		1	1	,	,
<pre>klim energy requirement on the province (11 + 12)</pre>	31	37	41	94	51	53	09	63	67	77,	0
										+/	00

SUMMARY - NOVA SCOTIA

Thousands of kilowatts

									0 0	T 0 4	
	4		1053	1057	1055	1956	1957		4	¢	
	1950	1952	1933	+C6T	7377	2004		1958	1959	1960	1961
CAPABILITY:											
1. Net generating capability:					261	136	126	126	126	145	145
(a) Hydro (b) Thermal	113 96	117	176	188	248	242	289	288	355	370	370
2. Receipts of firm power from:											
(a) Other provinces	1	1	1	1	1	ı		,	f		1 1
(b) United States	1	1	1		1	1	1	1	•		
3. Deliveries of firm power to:										(
(a) Other provinces	2	2	2	2	2	2	2	2	ლ 1	m +	† 1
(b) United States	ı		-		'	1					
4. Net capability (1 + 2 - 3)	207	269	298	316	382	376	413	412	478	512	511
				ACTUA	ı				FORE	CAST	- 16
24	163	213	235	245	278	301	322	350	379	907	436
	7	2	4	m	1			1	ı	ı	1
b. Indicated snortage											
7. Indicated demand within province (5 + 6)	167	215	239	248	278	301	322	350	379	907	436
INDICATED RESERVE:	07 +	+ 54	+ 59	+ 68	+ 104	+ 75	+ 91	+ 62	66 +	+ 106	+ 75
8. Difference (4 - /)								:			
				MIL	LIONS	OF KIL	OWATT	HOURS			
FIRM ENERGY REQUIREMENT: 9. Firm energy requirement within province	891	1,122	1,211	1,277	1,357	1,486	1,466	1,630	1,737	1,844	1,967
10. Indicated shortage			'		•						
 Indicated firm energy requirement within province (9 + 10) 	891	1,122	1,211	1,277	1,357	1,486	1,466	1,630	1,737	1,844	1,967
12. Deliveries of firm energy to:					,	¢	(-	Ξ	1.0	13
(a) Other provinces (b) United States	91	7	7	7 -	00 1	00 1	ю і	0 -	-		1
(c) Total (a + b)	9	7	7	7	8	80	80	10	11	12	13
13. Firm energy requirement on the		00.	8101	1 284	1.365	1,494	1,474	1,640	1,748	1,856	1,980
province (11 + 12)	897	1,129	1,210	1,204	1,000	73.17.					

TABLE I

SUMMARY - NEW BRUNSWICK

	1950	1952	1953	1954	1955	1956	1957		FORE	CAST	
CAPABILITY:								1958	1959	1960	1961
1. Net generating capability:											
(a) Hydro (b) Thermal	90	92	112	112	112	112	148	184	184	184	184
2. Receipts of firm power from:				4	****	1/1	1/3	193	193	243	293
(a) Other provinces (b) United States	- 5	2	2	2	7	70	2	5	5	'n	í
3. Deliveries of firm power to:			,	,	•	1	1	1		,	•
(a) Other provinces (b) United States	1 1	1 7	1 1	,	1	1		1			
			9	5	5	5	00	00	œ	7	7
4. Net capability (1 + 2 - 3)	189	201	240	241	255	286	318	374	374	425	475
				ACTUA	T				FORE	CAST	
FIRM POWER PEAK LOAD: 5. Within province	177	193	201	210	235	243	258	273			
6. Indicated shortage		•	ı	1	7	1	0 1	5/7	067	312	395
7. Indicated demand within province $(5+6)$	177	193	201	210	236	276	0 7 0	020			•
INDICATED RESERVE.						C+7	6.70	2/3	290	312	395
8. Difference (4 - 7)	+ 12	∞ +	+ 39	+ 31	+ 19	+ 43	09 +	+ 101 +	+ 84	+ 113	+ 80
				MIL	LIONS	OF KIL	OWATT	HOURS			
FIRST ENERGY REQUIREMENT: 9. Firm energy requirement within province 10. Indicated character	961	1,024	1,044	1,189	1,237	1,262	1,333	1,463	1,552	1,695	2,266
		1		1	1	4	56	1	ı	1	
 Indicated firm energy requirement within province (9 + 10) 	961	1,024	1,044	1,189	1,237	1,262	1,389	1,463	1.552	1 695	230 0
12. Deliveries of firm energy to:									2000	2,000	2,200
(a) Other provinces(b) United States	41	33	36	- 29	33	32	- 29	- 58	- 25		1 5
(c) Total (a + b)	41	33	36	59	33	32	29	28	25	27	130
13. Firm energy requirement on the province $(11 + 12)$	1,002	1,057	1.080	1 248	070 1	1 20%	1 /10			7.7	67
				43640	4,2470	1,294	1,418	1,491	1,577	1,717	2,285

SUMMARY - QUEBEC

Thousands of kilowatts

							1		FORE	CAST	
	1950	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
CAPABILITY:											
1. Net generating capability: (a) Hydro	4,370	4,877	5,300	5,378	5,583	5,854	6,406	6,827	8,223	8,796	8,892
(b) Inermal 2. Receipts of firm power from:	P									;	Ť
	H 1	н .	el 1	4	1 5	7 4	- 1	r 1		14	T+ T
 Deliveries of firm power to: Other provinces* Inited States 	732 56	736	737 56	719	729	691 56	694	695	697	700	702 56
4. Net capability (1 + 2 - 3)	3,609	4,114	4,543	4,643	4,840	5,154	5,718	6,141	7,537	8,114	8,218
				ACTUA	ı				FORE	CAST	- 18
14	3,174	3,752	3,951	4,092	4,367	4,951	5,475	5,642	6,072	6,413	6,750
6. Indicated shortage	*	1	4		+						
 Indicated demand within province + 6) 	3,174	3,752	3,955	4,092	4,411	4,995	5,477	5,642	6,072	6,413	6,750
INDICATED RESERVE: 8. Difference (4 - 7)	+ 435	+ 362	+ 588	+ 551	+ 429	+ 159	+ 241	+ 499	+ 1,465	+ 1,701	+ 1,468
				MIL	LIONS	OF KIL	OWATT	HOURS			
FIRM ENERGY REQUIREMENT: 9. Firm energy requirement within province 10. Indicated shortage	20,442	24,469	26,711	27,954	29,479	31,088	31,845	35,071	39,159	41,481	43,149
11. Indicated firm energy requirement within province $(9+10)$	20,565	24,506	26,712	27,955	29,841	32,634	32,385	35,071	39,159	41,481	43,149
12. Deliveries of firm energy to:(a) Other provinces*(b) United States	4,425	4,456	4,434	4,331	4,260	4,117	4,075	4,090	4,108 485	4,120	4,137
(c) Total (a + b)	4,915	4,947	4,924	4,821	4,750	4,608	4,560	4,575	4,593	4,605	4,622
 Firm energy requirement on the province (11 + 12) 	25,480	29,453	31,636	32,776	34,591	37,242	36,945	39,646	43,752	46,086	47,771

^{*} Includes deliveries supplied from Cedars on a short term basis. Figures for earlier years revised

TABLE I

SUMMARY - ONTARIO

	1950	1052	1053	7 40 5					1		
	2007	7777	1900	1954	1955	1956	1957		F O K	ECAST	
CAPABILITY:								1958	1959	1960	1961
1. Net generating capability: (a) Hydro (b) Thermal	2,367	2,672	2,684	3,481	3,688	3,778	4,145	5,014	5,431	5,431	5,353
	741	745	746	732	741	702	658	671	969	869	2007
	85	85	85	85	85	886	1 86	86	86	1 86	17
4. Net capability (1 + 2 - 3)	3,221	3,921	4,153	4,734	5,143	5,180	5,503	6,590	7,229	7,609	7,971
The state of the s				ACTUA	L				FORE	CAST	
5. Within province 6. Indicated shortage	3,078	3,803	3,969	4,261	4,757	5,064	5,369	5,828	6,209	6,616	19 -
7. Indicated demand within province (5 + 6)	3,291	3,804	4,029	4,261	4.775	5.064	3,60	000	1		
INDICATED RESERVE: 8. Difference (4 - 7)	- 70	+ 117	+ 124	+ 473	+ 368	+ 116	+ 134	,,020	6,209	6,616	6,980
TOWN CHARLES OF THE PROPERTY O				MIL	LIONS	OF KIL	OWATT	HOURS			100
9. Firm energy requirement within province 10. Indicated shortage 11. Indicated firm concernations.	18,016	21,630	22,985	23,928	26,376	28,875	30,768	33,063	35,196	37,545	39,422
	18,271	21,639	22,987	23,929	26,382	28,875	30,768	33,063	35,196	37,545	39,422
	703	93	668	3 624	3 687	4 703	4 658	4 47	7 49	779	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
(c) Total (a + b)	705	693	671	627	069	707	662	651	651	651	797
province (11 + 12) ** Onebec rouses only to the	18,976	22,332	23,658	24,556	27,072	29,582	31,430	33,714	35,847	38,196	39,886

^{39,886} ** Quebec power sold to the United States but diverted to Ontario at Cedars formerly treated as imported from United States now treated as received from Quebec. Figures for

TABLE I

SUMMARY - MANITOBA

Thousands of kilowatts

									FOREC	AST	
	1950	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961
CAPABILITY:											
1. Net generating capability: (a) Hydro (b) Thermal	418 10	487	487	522 46	547	55 6 46	561	561	561	561 231	561 231
2. Receipts of firm power from: (a) Other provinces (b) United States	80 1	79	79	80	- 19		691	69	74	74	74
3. Deliveries of firm power to: (a) Other provinces (b) Indea States	61	6 1	ବ ।	13	14	14	14	1 1		4 4	1 P
	487	567	580	635	658	652	769	798	803	866	866
4. Net capatitly (1 . 2 .)				ACTUA	L				FOREC	AST	20 -
FIRM POWER PEAK LOAD: 5. Within province	419	097	512	533	594	909	809	685	730	770	810
	4	•		a				o d	730	770	810
7. Indicated demand Within province (5 + 6)	419	097	512	533	594	605	000				
INDICATED RESERVE:	+ 68	+ 107	+ 68	+ 102	+ 64	+ 47	+ 86	+ 113	+ 73	96 +	+ 56
				MIL	LIONS	OF KIL	OWATT	HOURS			
DET.	2,218	2,559	2,705	2,886	3,122	3,414	3,435	3,634	3,884	4,084	4,284
 Indicated shortage Indicated firm energy requirement within province (9 + 10) 	2,218	2,559	2,705	2,886	3,122	3,414	3,435	3,634	3,884	4,084	4,284
12. Deliveries of firm energy to: (a) Other provinces	79	62	79	114	114	76	136	70	30	30	30
(c) Total (a + b)	79	79	79	114	114	76	136	70	30	30	30
13. Firm energy requirement on the province (11 + 12)	2,297	2,638	2,784	3,000	3,236	3,508	3,571	3,704	3,914	4,114	4,314

^{*} See note on page 21.

TABLE I

SUMMARY - SASKATCHEWAN

	1950	1952	1953	1954	1955	1956	1957		FORE	CAST	
CAPABILITY:								1958	1959	1960	1961
1. Net generating capability:											
(a) Hydro (b) Thermal 2. Receipts of firm power from:	85	85 172	197	85 243	82 257	320	87 376	87	87	87 679	87
(a) Other provinces(b) United States3. Deliveries of firm power to:	1-1	1 1	1 1	1.1	()	1 1	1 1		2 1	1.1	1 1
(a) Other provinces (b) United States	89 -	- 2	79	80	79	79	72	72	77	77	7.7
4. Net capability (1 + 2 - 3)	146	178	203	248	260	338	391	471	599	- 689	- 689
PIRM DOURD DRAV TOAD.				ACTUA	L				FORE	CAST	- 2
5. Within province 6. Indicated shortage	128	144	169	196	227	278	299	342	389	440	493
7. Indicated demand within province (5 + 6)	128	144	169	196	227	278	299	342	389	- 077	707
ANDICATED RESERVE: 8. Difference (4 - 7)	+ 18	+ 34	+ 34	+ 52	+ 33	09 +	+ 92	+ 129	+ 210	+ 249	+ 196
FIRM RNERCY BROHTBENGAM				MIL	LIONS	OF KIL	OWATT	HOURS			
9. Firm energy requirement within province 10. Indicated shortage	405	550	629	742	877	1,047	1,276	1,458	1,650	1,859	2,083
	405	550	629	742	877	1,047	1,276	1,458	1,650	1,859	2.083
12. Deliveries of firm energy to:(a) Other provinces(b) United States	200	542	559	558	571	554	503	503	553	553	553
(c) Total (a + b)	500	542	559	558	571	554	503	503	553	553	553
province (11 + 12)	905	1,092	1,188	1,300	1,448	1,601	1,779	1,961	2,203	2,412	2,636
" rigures revised, transferring to Manitoba some energy requirement formerly included with Saskatchewan in error.	energy requ	irement form	erly include	d with Saska	tchewan in e	rror.					

TABLE I

SUMMARY - ALBERTA

Thousands of kilowatts

					L. L.	990 F	1957		FOREC	4	
	1950	1952	1953	1954	1955	1950	1551	1958	1959	1960	1961
Net generating capability: (a) Hydro (b) Thermal	83 108	162 119	162	202	220	338	238	23 8 494	238	318 575	318 578
Receipts of firm power from: (a) Other provinces (b) United States	(-1	1 1	\$ I	7 -	()	7 1	4 -	4 1	1 1	1 1	1 1
Deliveries of firm power to: (a) Other provinces (b) Infred States	നി	7 -	∞ ı	1 1	e i :	1 +	s 3	1 1	1 1	5 4	1 7 ;
Net capability (1 + 2 - 3)	188	274	341	400	455	562	592	736	736 F O R E (893 C A S T	- 2:
FIRM POWER PEAK LOAD: 5. Within province	176	233	284	, m	391	451	. 476	544	602	665	730
Indicated shortage Indicated demand within province (5 + 6)	176	233	284	313	391	451	476	544	602	665	730
VIED RESERVE: Difference (4 - 7)	+ 12	+ 41	+ 57		79 +	+ 111	+	+ 192	+ 136	+ 228	+ 166
FIRM ENERGY REQUIREMENT: 9. Firm energy requirement within province	1,023	1,167	1,372	M I L 1,581	1,859	2,180	2,424	2,638	2,857	3,126	3,426
Indicated firm energy requirement within province (9 + 10)	1,023	1,167	1,372	1,581	1,859	2,180	2,424	2,638	2,857	3,126	3,426
Deliveries of firm energy to: (a) Other provinces (b) United States	14	30	91	1 1	1 1	8 8	1 1	2 1	1 1	1 1	s t
(c) Total (a + b)	14	30	9	8	1		5	1	5	1	•
Firm energy requirement on the province (11 + 12)	1,037	1,197	1,378	1,581	1,859	2,180	2,424	2,638	2,857	3,126	3,426

TABLE I

SUMMARY - BRITISH COLUMBIA

1. Net generating capability: (a) Hydro	1,003 1,003 1,109 1,109	1,578 130 130 1,674 A C T U A 1	1,614 133 3 20 1,730 1,386	1,866 1,866 1,53 2,067 1,724	2,346	2,347	2,569 339 2,908 2,908	2,644 524 524 3,168	2,683
### ##################################		1,578 130 1,674 C T U A		1,866 153 153 2,067 1,724	2,346	2,347	m m	4	2,683 6888 3 3,371 2,613
### ##################################		1,578 130 1,674 C T U A C T U A		1,866	2,346	2,347	m m	W W	2,683
852 96 96 96 10 10 10 10 10 10 10 10 10 10		1,578 130 130 1,674 C T U A		1,866	2,187	2,347	(A)	V V	2,683
es an power from: 13		200 4 4 30 30 C T U A		2,067	2,346	348	(H)	▼	3,371
es 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3	1,01/	4 4 30 30 C T U A C T U A C T U A C T U A		2,067	2,346	2,691	(H)	W W	3,371
# 2 - 3) # 2 - 3) # 2 - 3) # 30 # 1.0 # 122 + 1: # 123 + 1: # 124 + 1: # 125 + 1:	1,1	4 30 1,674 C T U A 1,275		2,067	2,346	2,691	(H)	∢	3,371
+ 2 - 3) 921 1,0 + 2 - 3) 921 1,0 799 9 799 9 + 122 + 1; ement within province 4,523 4,9;	1,1	4 30 30 1,674 C T U A C. 1,275		2,067	2,346	2,691	(E)	W A	3,371
+ 2 - 3) 921 14thin province 799 + 122 + 122 + 122 + 122		CIUA CIUA 1,275		2,067	2,346	2,691	E E	W W	3,371
799		C T U A		1,724	1,861		O R E	A S	2,613
199		1,275	1,386	1,724	1,861				2,613
ithin province 799 + 122 + + 122 + + 14 + 1523 + 4,523		1,275	1,386	1,724	1,861				2,613
ithin province 799 + 122 + 600 + 120				1		2,100	2,178	2,411	
199 + 122 + + ment within province 4,523 4,					1	-	,	1	1
+ 122 + + 122 + + 124 + + 125 + + + 125 + + + 125 + + + 125 + + + 125 + + + 125 + + + 125 + + + + 125 + + + + 125 + + + + 125 + + + + 125 + + + + 125 + + + + 125 + + + + 125 + + + + 125 + + + + + + + + + + + + + + + + + + +	1,022	1,275	1,386	1,725	1,861	2,100	2,178	2 4.11	9 613
+ 122 + + 124 + + 125 + + 125 + + 125 + + 125 + + 125 + + 125 + 12								71161	2,013
ement within province 4,523	+ 87	+ 399	+ 344	+ 342	+ 485	+ 591	+ 730	+ 757	+ 758
ement within province 4,523		MILI	LIONSO	FKIL	OWATT	HOURS			
Indicated charteness William province 4,523									
	5,466	6,414	8,011	9,802	11,642	13,076	13,836	14,735	15,890
11. Indicated firm energy requirement					2	•		3	
	5,466	6,414	8,011	9,802	11,682	13,076	13,836	14,735	15,890
12. Deliveries of firm energy to:									
(a) Other provinces (b) United States	184	10 184	10 122	10	6 1	6 1	δ (Φ (6
(c) Total (a + b) 184 184	184	194	132	10	6	6	6	0	
13. Firm energy requirement on the province (11 + 12) 5,163	5,650	6.608	8.143	0 812	11 601	000			

TABLE I

SUMMARY - YUKON AND NORTH WEST TERRITORIES

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	0	1000	1053	105%	1055	1956	1957		4	9	-
	1950	7661	1933	+067	1222	2004	100	1958	1959	1960	1961
A DA DITITIO.											
WAR COMPANY COMMENTALISM											
1. Net generating capability.	·	ì	70	,,,	00	33	25	36	36	41	41
(a) Hydro (b) Thermal	17	† 1	† I	t 1	1 1	1] =	. ~	2	m	en
2. Receipts of firm power from:											
(a) Other provinces	,	1	,	1	1	1	1	ı			•
(b) United States	ı	1	,	ð	1	1	ı	1	1	1	1
3. Deliveries of firm power to:											
(a) Other provinces	1	1	1	1	1	1	1	1		ı	t
(b) United States		1	1		1	1	4	1	-		'
4. Net capability (1 + 2 - 3)	21	24	24	24	22	23	26	37	38	777	777
				ACTUA	1 L				FORE	CAST	- 24
FIRM POWER PEAK LOAD:											
5. Within province	14	16	17	18	19	19	19	29	32	35	35
6. Indicated shortage	ı		1	•	,		8	1	1	•	-
7. Indicated demand within province (5 + 6)	14	16	17	18	19	19	19	29	32	35	35
INDICATED RESERVE:		a d	F 4	4	+	7 +	+ 7	« +	9	6 +	6 +
8. Difference (4 - /)	+										
				MILLI	0 N S 0	F KILOW	VATT HO	URS			
FIRM ENERGY REQUIREMENT: 9. Firm energy requirement within province	67	99	83	68	96	86	115	125	171	177	186
10. Indicated shortage	1	•	,	,	•			,	\$	6	1
11. Indicated firm energy requirement within province (9 + 10)	67	99	83	89	96	98	115	125	171	177	186
12. Deliveries of firm energy to:											,
(a) Other provinces (b) United States	1 1					, ,			1 1		
(c) Total (a + b)	,		1	b	ı	-	1	1	1	1	1
 Firm energy requirement on the province (11 + 12) 	67	99	83	89	96	86	115	125	171	177	186
			-								

TABLE II

NET GENERATING CAPABILITY WITHIN PROVINCES*

FORECAST PERCENTAGE CHANGE	1953 1954 1955 1956 1957 1958 1959 1960 1961 1953- 1957- 1953- 1961 1961	217 223 223 242 249 262 292 303 307 14,7 23.3 41.5	18 18 18 25 26 26 41 38.9 64.0 127.8	300 318 384 378 415 414 481 515 515 38.3 24.1 71.7	244 244 256 286 321 377 377 427 477 31.6 48.6 95.5	5,335 5,413 5,619 5,890 6,461 6,885 8,283 8,856 8,962 21.1 38.7 68.0 5	3,493 4,088 4,488 4,565 4,932 6,006 6,620 6,998 7,313 41.2 48.3 109.4	510 568 593 602 639 729 729 792 792 25.3 23.9 55.3	282 328 339 402 463 542 674 766 766 64.2 65.4 171.6	349 396 458 558 732 738 893 896 68.5 52.4 156.7	1,131 1,708 1,747 2,019 2,350 2,695 2,908 3,168 3,371 107.8 43.4 198.1	24 24 22 23 26 37 38 44 44 8.3 69.2 83.3	1 003 13 300 14 147 14 1500
	1952 1953	200 217	18 18	271 300	206 244	4,905 5,335	3,262 3,493	497 510	257 282	281 349	1,083 1,131	24 24	11,004 11,903
ROVINCE	1950	Newfoundland (including Labrador) 188	Prince Edward Island 10	Nova Scotia 209	New Brunswick 192	Quebec 4,396	Ontario 2,566	Manitoba 428	Saskatchewan 214	Alberta 191	British Columbia 948	Yukon and N.W.T.,	Canada 9.363

^{*} Hydro plus thermal (Table I, item la + 1b)

TABLE 111

FIRM POWER PEAK LOAD WITHIN PROVINCES*

1961 1953 1951 1951 1951 1951 1951 1951 1951 1951 1951 1951 1951 1952							<u>Fz.</u>	ORECA			1 1	PERCENTAGE CHANGE	
224 222 234 247 258 266 13.8 19.8 12 14 16 18 19 21 40.0 50.0 301 322 350 379 406 436 34.7 35.4 243 258 273 290 312 395 28.4 53.1 4,995 5,477 5,642 6,072 6,413 6,750 38.5 23.2 5,064 5,369 5,828 6,209 6,616 6,980 33.3 30.0 605 606 665 770 810 18.8 33.2 278 299 342 389 440 493 76.9 64.9 451 476 544 602 665 730 67.6 53.4 451 476 544 602 665 730 67.6 53.4 1,725 1,861 2,100 2,118 2,411 2,613 <t< td=""><td>1950 1952 1953 1954</td><td>1957</td><td></td><td>1955</td><td>1956</td><td>1957</td><td>1958</td><td>1959</td><td>1960</td><td>1961</td><td>1953-</td><td>1957-</td><td>1953-</td></t<>	1950 1952 1953 1954	1957		1955	1956	1957	1958	1959	1960	1961	1953-	1957-	1953-
12 14 16 18 19 21 40.0 50.0 301 322 350 379 406 436 34.7 35.4 243 258 273 290 312 395 28.4 53.1 4,995 5,477 5,642 6,072 6,413 6,750 38.5 23.2 5,064 5,369 5,828 6,209 6,616 6,980 33.3 30.0 605 608 685 730 770 810 18.8 33.2 451 476 544 602 665 730 67.6 53.4 451 476 544 602 665 730 67.6 53.4 1,725 1,861 2,100 2,178 2,411 2,613 82.1 40.4 19 19 29 32 35 35 11.8 82.1 40.4 13,917 14,925 15,623 19,529	177 186 195 202	202		207	224	222	234	247	258	266	13.8	19.8	36.4
301 322 350 379 406 436 34.7 35.4 243 258 273 290 312 395 28.4 53.1 4,995 5,477 5,642 6,072 6,413 6,750 38.5 23.2 5,064 5,369 5,828 6,209 6,616 6,980 33.3 30.0 605 608 685 730 770 810 18.8 33.2 278 299 342 389 440 493 76.9 64.9 451 476 544 602 665 730 67.6 53.4 1,725 1,861 2,100 2,178 2,411 2,613 82.1 40.4 19 19 29 32 35 35 11.8 84.2 13,917 14,925 16,043 17,146 18,345 19,529 40.4 30.8	8 9 10 11	11		12	12	14	16	18	19	21	0.04	20.0	110.0
4,995 5,477 5,642 6,072 6,413 6,750 38.5 23.2 5,064 5,369 5,828 6,209 6,616 6,980 33.3 30.0 605 608 685 730 770 810 18.8 33.2 278 299 342 389 440 493 76.9 64.9 451 476 544 602 665 730 67.6 53.4 1,725 1,861 2,100 2,178 2,411 2,613 82.1 40.4 19 19 29 32 35 35 11.8 84.2 19 19 29 32 35 11.8 80.4 40.4 13,917 14,925 16,043 17,146 18,345 19,529 40.4 30.8	167 215 239 248	248		278	301	322	350	379	907	436	34.7	35.4	82.4
4,995 5,477 5,642 6,072 6,413 6,750 38.5 23.2 5,064 5,369 5,828 6,209 6,616 6,980 33.3 30.0 605 608 685 730 770 810 18.8 33.2 278 299 342 389 440 493 76.9 64.9 451 476 544 602 665 730 67.6 53.4 1,725 1,861 2,100 2,178 2,411 2,613 82.1 40.4 19 19 29 32 35 35 11.8 84.2 13,917 14,925 16,043 17,146 18,345 19,529 40.4 30.8	177 193 201 210	210		236	243	258	273	290	312	395	28.4	53.1	96.5
5,064 5,369 5,828 6,209 6,616 6,980 33.3 30.0 605 608 685 730 770 .810 18.8 33.2 278 299 342 389 440 493 76.9 64.9 451 476 544 602 665 730 67.6 53.4 1,725 1,861 2,100 2,178 2,411 2,613 82.1 40.4 19 19 29 32 35 35 11.8 84.2 13,917 14,925 16,043 17,146 18,345 19,529 40.4 30.8	3,174 3,752 3,955 4,092	4,092		4,411	4,995	5,477	5,642	6,072	6,413	6,750	38.5	23.2	7.07
605 608 685 730 770 .810 18.8 33.2 278 299 342 389 440 493 76.9 64.9 451 476 544 602 665 730 67.6 53.4 1,725 1,861 2,100 2,178 2,411 2,613 82.1 40.4 19 19 29 32 35 35 11.8 84.2 13,917 14,925 16,043 17,146 18,345 19,529 40.4 30.8	3,291 3,804 4,029 4,261	4,261		4,775	5,064	5,369	5,828	6,209	6,616	086,9	33.3	30.0	73.2
278 299 342 389 440 493 76.9 64.9 451 476 544 602 665 730 67.6 53.4 1,725 1,861 2,100 2,178 2,411 2,613 82.1 40.4 19 19 29 32 35 35 11.8 84.2 13,917 14,925 16,043 17,146 18,345 19,529 40.4 30.8	419 460 512 533	533		594	909	809	685	730	770	.810	18.8	33.2	58.2
451 476 544 602 665 730 67.6 53.4 1,725 1,861 2,100 2,178 2,411 2,613 82.1 40.4 19 19 29 32 35 35 11.8 84.2 13,917 14,925 16,043 17,146 18,345 19,529 40.4 30.8	128 144 169 196	196		227	278	299	342	389	077	493	76.9	6.49	191.7
1,725 1,861 2,100 2,178 2,411 2,613 82.1 40.4 19 19 29 32 35 35 11.8 84.2 13,917 14,925 16,043 17,146 18,345 19,529 40.4 30.8	176 233 284 313	313		391	451	927	544	602	665	730	67.6	53.4	157.0
19 19 29 32 35 35 11.8 84.2 13,917 14,925 16,043 17,146 18,345 19,529 40.4 30.8	799 932 1,022 1,275	1,275		1,386	1,725	1,861	2,100	2,178	2,411	2,613	82.1	40°4	155.7
13,917 14,925 16,043 17,146 18,345 19,529 40.4 30.8	14 16 17 18	18		19	19	19	29	32	35	35	11.8	84.2	105.9
	8,530 9,944 10,633 11,359	11,359	1	12,536	13,917	14,925	16,043	17,146	18,345	19,529	40.4	30.8	83.7

* Indicated Firm Demand (Table I, item 7)

FIRM ENERGY REQUIREMENT WITHIN PROVINCES*

Millions of Kilowatt Hours

PROVINCE									FOREC	AST		PERC	PERCENTAGE CHANGE	ICE	
	1950	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1953-	1957-	1953-	
Newfoundland (including Labrador)	1,058	1,157	1,190	1,234	1,299	1,374	1,333	1,461	1,526	1,616	1,725	12.0	29.4	45.0	1
Prince Edward Island	31	37	41	97	51	53	09	63	29	74	80	46.3	33.3	95.1	
Nova Scotia	891	1,122	1,211	1,277	1,357	1,486	1,466	1,630	1,737	1,844	1,967	21.1	34.2	62.4	
New Brunswick	961	1,024	1,044	1,189	1,237	1,262	1,389	1,463	1,552	1,695	2,266	33.0	63.1	117.0	
Quebec	20,565	24,506	26,712	27,955	29,841	32,634	32,385	35,071	39,159	41,481	43,149	21.2	33.2	61.5	- 27
Ontario	18,271	21,639	22,987	23,929	26,382	28,875	30,768	33,063	35,196	37,545	39,422	33.8	28.1	71.5	-
Manitoba**	2,218	2,559	2,705	2,886	3,122	3,414	3,435	3,634	3,884	4,084	4,284	27.0	24.7	58.4	
Saskatchewan**	405	550	629	742	877	1,047	1,276	1,458	1,650	1,859	2,083	102.9	63.2	231.2	
Alberta	1,023	1,167	1,372	1,581	1,859	2,180	2,424	2,638	2,857	3,126	3,426	76.7	41.3	149.7	
British Columbia	4,523	4,979	5,466	6,414	8,011	9,802	11,682	13,076	13,836	14,735	15,890	113.7	36.0	190.7	
Yukon and N.W.T.	29	99	83	89	96	8	115	125	171	177	186	38.6	61.7	124.1	
Canada	50,013	58,806	63,440	67,342	74,132	82,225	86,333	93,682	101,635	108,236	114,478	36.1	32.6	80.5	1

* Table I item 11.

TABLE V

INDICATED RESERVE*

									FOREC	AST		PERCI	PERCENTAGE CHANGE	E
	1950	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1953- 1957	1957- 1961	1953- 1961
Mary County														
(including Labrador)	188	200	217	223	223	242	249	262	292	303	307	14.7	23,3	41.5
1. Gross capability 2. Total firm demand on		701	1 0	202	207	230	228	240	253	271	279	16.9	22.4	43.1
	1//	100	22	217	16	12	21	22	39	32	28	ххх	XXX	xxx
 Indicated reserve (1-1) Indicated reserve expressed as a % of total 	11	14	1			c u	c	0	15.4	11.8	10.0	xxx	XXX	XXX
firm demand ==	6.2	7.5	11.2	10.4	1.1	7*5	7.5	7.6						
91	01	80	18	18	18	18	25	26	26	26	41	38.9	0.49	127.8
2. Total firm demand on) a	, σ	10	11	12	12	14	16	18	19	21	0.04	50.0	110.0
the province 3. Indicated reserve (1-2)	2 2	6	0	7	9	9	good good	10	00	7	20	XXX	xxx	XXX
4. Indicated reserve expressed as a % of total	25.0	100.0	80.0	63.6	50.0	20.0	78.6	62.5	4.44	36.8	95.2	XXX	xxx	XXX
True comore														
G2	209	271	300	318	384	378	415	414	187	515	515	38.3	24.1	71.7
2. Total firm demand on	169	217	241	250	280	303	324	352	382	604	0440	34.4	35.8	82.6
	07	54	59	68	104	75	91	62	66	106	75	xxx	XXX	XXX
4. Indicated reserve ex- pressed as a % of total firm demand	23.7	24.9	24.5	27.2	37.1	24.8	28.1	17.6	25.9	26.0	17.0	xxx	XXX	xxx
	70,	a c	37/6	976	260	291	326	382	382	432	482	32.5	6.74	6.56
1. Gross capability 2. Total firm demand on	183	2002	202	215	241	248	266	281	298	319	402	28.5	51.1	94.2
the province 3 Indicated reserve (1-2)	12	80	39	31	19	43	09	101	84	113	80	xxx	XXX	×××
					1	1	9	3,5	28.2	35.4	19.9	xxx	xxx	xxx
firm demand	9.9	0.4	18.8	14.4	6.7	17.3	0.77	2						

* Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3).

TABLE V

INDICATED RESERVE*

										FOREC	AST		PERC	PERCENTAGE CHANGE	GE
		1950	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1953-	1957-	1953-
-															1007
1. G	Gross capability Total firm demand on	4,397	4,906	5,336	5,418	5,625	5,901	6,468	6,892	8,290	8,870	8,976	21.2	38.8	68.2
	the province	3,962	4,544	4,748	4,867	5,196	5,742	6,227	6,393	6.825	7.169	7 508	31 1	000	
4°. I	Indicated reserve (1-2)	435	362	588	551	429	159	241	667	1,465	1.701	1.468	7.70	20.02	1.00
	pressed as a % of total												YYY	XXX	×××
	firm demand	11.0	8.0	12.4	11.3	8.3	2.8	3.9	7.8	21.5	23.7	19.6	XXX	XXX	XXX
Ontario															VVV
1. G	Gross capability Total firm demand on	3,307	4,007	4,239	4,820	5,229	5,267	5,590	6,677	7,316	7,696	8,013	31.9	43.3	89.0
	the province	3,377	3,890	4,115	4,347	198,4	5,151	5,456	5,915	96.50	6 703	7 000) (
4. 1. 1.	Indicated reserve (1-2)	- 70	117	124	473	368	116	134	762	1,020	993	7,022	32.0	7.87	9,07
	pressed as a % of total											1	YYY	XXX	XXX
	tirm demand ==		3.1	3.1	11.1	7.7	2.3	2.5	12.9	16.2	14.8	14.1	***	>	
Manitoba	Ø.												Will be	VVV	XXX
1. G	1. Gross capability 2. Total firm demand on	967	576	589	949	672	999	708	798	803	998	998	20.2	22.3	47.0
	the province	428	694	521	546	809	619	622	685	730	770	018	10 /	000	
4. H	Indicated reserve (1-2)	68	107	89	102	99	47	986	113	73	96	56	xxx	30.2 xxx	xxx
	firm demand % OI total	15.9	22.8	13.1	18.7	10.5	7.6	13.8	16.5	10.0	12 5	0			
Saskatchewan	hewan												YYY	XXX	XXX
1. G1 2. Tc	Gross capability Total firm demand on	214	257	282	328	339	402	463	543	929	766	766	64.2	65.4	171.6
	the province	196	223	248	276	306	342	371	414	797	517	570	7 07		
3. Ir 4. Ir	Indicated reserve (1-2) Indicated reserve ex-	18	34	34	52	33	0.9	92	129	210	249	196	49.0	53.6	129.8
- part '	pressed as a % of total											_		vvv	YYY
	ilrm demand	20.0	18.8	16.8	21.3	12.0	17.5	24.8	31.2	45.1	48.2	34.4	XXX	***	
													denes.	000	×××

* Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3)

TABLE V

INDICATED RESERVE*

									FORECI	AST		PERC	PERCENTAGE CHANGE	EL C
	1950	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1953- 1957	1957- 1961	1953- 1961
Alberta 1 Cross capability	191	281	349	400	458	562	592	736	738	893	968	9.69	51.4	156.7
	179	240	292	313	394	451	9/4	544	602	665	730	63.0	53.4	150.0
3. Indicated reserve (1-2)	12	4.1	57	87	99	111	116	192	136	228	166	XXX	XXX	ххх
	6.7	17.1	19.5	27.8	16.2	24.6	24.4	35.3	22.6	34.3	22.7	xxx	xxx	xxx
British Columbia												6	2 67	0 90
1. Gross capability	951	1,090	1,139	1,708	1,750	2,071	2,350	2,695	2,908	3,168	3,371	106.3	43.4	0.061
2. Total firm demand on the province	829	962	1,052	1,309	1,406	1,729	1,865	2,104	2,178	2,411	2,613	77.3	40.1	148.4
	122	128	87	399	344	342	485	591	730	757	758	XXX	XXX	XXX
4. Indicated reserve ex- pressed as a % of total firm demand	14.7	13.3	8,3	30.5	24.5	19.8	26.0	28.1	33.5	31.4	29.0	xxx	XXX	XXX
tí														
Yukon and N.W.T.	21	24	24	24	22	23	56	37	38	7/7	57		69.2	83.3
2. Total firm demand on the province	14	16	17	18	19	19	19	29	32	35	35	11.8	84.2	105.9
3. Indicated reserve (1-2)	7	00	7	9	3	4	7	80	9	6	6	xxx	XXX	xxx
4. Indicated reserve ex- pressed as a % of total firm demand	50.0	50.0	41.2	33,3	15.8	21.1	36.8	27.6	18.8	25.7	25.7	XXX	xxx	xxx
11														
Canada 1. Gross capability	9,363	11,004	11,903	13,332	14,152	15,039	16,469	18,705	21,166	22,788	23,484	38.4	42.6	97.3
Total firm demand on Canada	8,706	10,122	10,810	11,535	12,702	14,064	15,075	16,193	17,296	18,494	19,633	39.5	30.2	81.6
Indicated reserve (1-2)	657	882	1,093	1,797	1,450	975	1,394	2,512	3,870	4,294	3,851	XXX	XXX	XXX
4. Indicated reserve ex- pressed as a % of total firm demand	7.5	8.7	10.1	15.6	11.4	6.9	9.2	15.5	22.4	23.2	19.6	xxx	XXX	XXX

^{*} Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3)

CANADIAN ELECTRICAL ASSOCIATION ELECTRIC POWER STATISTICS COMMITTEE

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Mr. G. A. Richardson, Dominion Bureau of Statistics, Ottawa, Ontario.

Members of the Surveys Sub-Committee serve as area representatives. The function of an area representative is primarily to act as the direct liaison between the company representatives in his area and the Dominion Bureau of Statistics on all matters relating to the power survey. For this reason area representatives must have the complete co-operation of company representatives in securing the information required for the power survey.





CATALOGUE No. 57-204

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ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

1958 Actual 1959 - 1962 Forecast

DOMINION BUREAU OF STATISTICS

Public Finance and Transportation Division
Transportation and Public Utilities Section



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ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

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Published by Authority of
The Honourable Gordon Churchill, Minister of Trade and Commerce

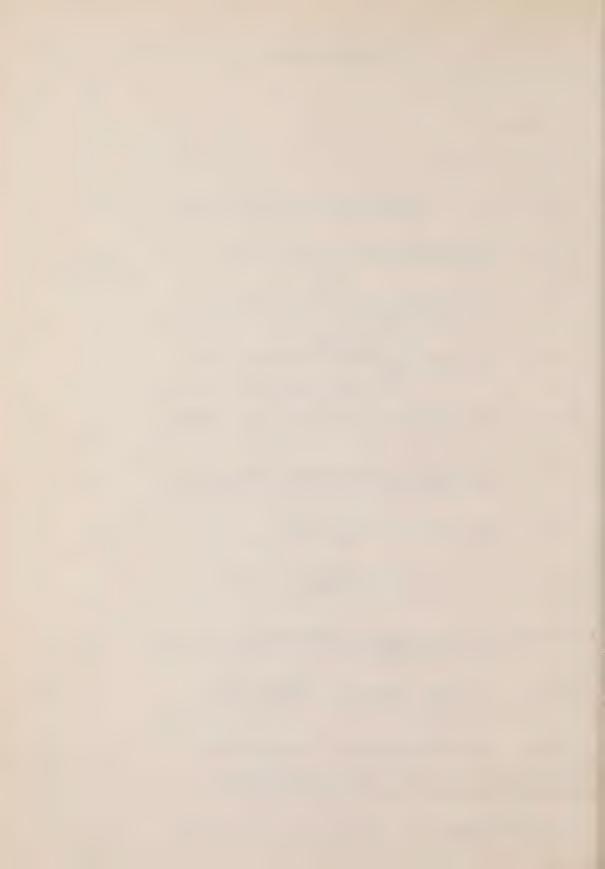
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Publications prepared in the Public Finance and Transportation Division dealing with electric power

Number	<u>Title</u>	Price
	<u>Annuals</u>	
57-201	Electric and Gas Meter Registrations	\$2.00
57-202	Electric Power Statistics	.75
57-203	Electricity Bills - Examples of the Applications of the Rates for Domestic, Commercial and Small Power Service	.50
	<u>Monthly</u>	
57-001	Electric Power Statistics Per yea	r \$1.00

TABLE OF CONTENTS

		Page
Introducti	on	1
Review of	Survey Results	2
Definition	S	5
Chart A:	Net Generating Capability within Canada, 1950 through 1962	6
Chart B:	Net Capability and Firm Demand within Canada, 1950 through 1962	7
Chart C:	Net Generating Capability within Provinces, 1950 through 1962	9
Chart D:	Net Capability and Firm Demand within Provinces, 1950 through 1962	10
Chart E:	Firm Energy Requirement within Canada, 1950 through 1962	12
Table I:	Summary by Provinces and Canada, 1950, 1953 through 1962	13
Table II:	Net Generating Capability within Provinces, 1950, 1953 through 1962	25
Table III:	Firm Power Peak Load Within Provinces, 1950, 1953 through 1962	26
Table IV:	Firm Energy Requirement within Provinces, 1950, 1953 through 1962	27
Table V:	Indicated Reserve, 1950, 1953 through 1962	28
Canadian El	ectrical Association Policy Sub-Committee	31
Surveys Sub	-Committee	2.2



Introduction

This report presents the results of the fifth annual Electric Power Survey of Capability and Load which was conducted in March 1959 by the Dominion Bureau of Statistics in cooperation with the Canadian Electrical Association. The Electric Power Survey embraces all producers of electric energy in Canada which generate 10,000,000 kilowatt hours or more per annum. The 1959 report is based on returns from 130 companies, half of which are utilities and the other half industrial establishments which generate power primarily for own use. As these 130 producers account for approximately 99 per cent of total generation in Canada, figures presented in this report may be regarded as being representative of the entire industry.

The statistics presented are for the years 1950, and 1953 - 1962 inclusive, the latter four years on a forecast basis. Capability and load figures are based on the situation as it existed at the time of each company's annual firm power peak load, load being calculated in terms of contractual commitments for firm power.

Generating capability is the maximum output that can be maintained at time of annual firm power peak load. Net generating capability refers to the amount left after power used in station service is deducted. It is calculated on the basis of actual operating experience assuming all equipment in working order and available for use. Net generating capability should not be construed as representing installed capacity a term used in reference to the name plate ratings of generating equipment as designated by the manufacturers.

The power situation in any province or for the country as a whole can be presented in several ways. Two of these are contained in the report and are based on the demand within the province (Table I) and the demand on the province (Table V). In each case the appropriate capability is also shown. Demand within the province is related to net capability which means net generating capability plus purchases less deliveries outside the province.

Presenting the power situation within Canada and within the individual provinces provides a measure of the growth of the industry within geographic areas and is of interest in measuring the contribution of the industry to the economic growth of the country as a whole. Demand on the province, however, is related to gross capability which is generating capability plus purchases outside the province and is of interest primarily from a utility point of view.

Some care must be exercised in the interpretation of these data. For example, the difference between gross capability and total firm demand is an indication of available reserves of power. Since power producers are not, however, all fully interconnected, reserves of power cannot always be completely utilized.

Review of Survey Results

Net Generating Capability: Total net generating capability in Canada in 1958 amounted to 18,628,000 kilowatts, an increase of 13.1 per cent over the 1957 total of 16,469,000 kilowatts. Further annual increases totalling 28.8 per cent over the next four years are expected to result in a net generating capability in 1962 of 23,999,000 kilowatts. The proportion of thermal generation to the total is expecte to rise from 14.6 per cent in 1958 to 22.9 per cent in 1962.

Firm Power Peak Load: Firm power peak load within Canada in 1958 was 15,485,000 kilowatts, an increase of 3.8 per cent over the 1957 total of 14,925,000. The forecast for 1962 is 20,137,000 kilowatts, an estimated rise of 30.0 per cent.

Indicated Reserve: The indicated reserve for Canada rose to 2,991,000 kilowatts from 1,394,000 in 1957. By 1962, it will have risen to 3,756,000 kilowatts, a reserve equivalent to 18.6 per cent of firm demand as compared with this year's 19.1 per cent.

Firm Energy Requirement: Firm energy requirement rose 1.0 per cent in 1958 to 87,173,000,000 kilowatt hours from 86,333,000,000 in 1957. A rise of 7.6 per cent to 93,841,000,000 kilowatt hours is forecast for 1959 and an increase of 33.7 per cent to 116,545,000,000 for 1962.

Table I - Summary (Pages 13 to 24): This table presents capability, firm power per load, indicated reserve and firm energy requirement summarized for Canada and for each of the provinces. Tables II - V compare provincial rates of growth in each of these categories with that for Canada as a whole.

Table II - Net Generating Capability Within Provinces (Page 25): During the four-year period ended 1958 net generating capability in Canada increased 39.8 per cent to 18,628,000 kilowatts from 13,328,000. A further rise of 28.8 per cent to 23,999,000 kilowatts is forecast for the next four years. Provincial rates of increase based on actual and forecast data for the period 1954-1962 range from a hig of 182.3 per cent in Alberta to a low of 42.2 per cent in Newfoundland, the comparable figure for all Canada being 80.1 per cent.

Table III - Firm Power Peak Load Within Provinces (Page 26): Firm power peak load is expected to rise 30.0 per cent during the next four years compared with an actu increase of 36.3 per cent between 1954 and 1958. In the eight-year period 1954-19 a growth in firm power peak load of 183.2 per cent is indicated in Saskatchewan an 181.2 per cent in Alberta. The forecast increase for all Canada is 77.3 per cent 20,137,000 kilowatts from 11,359,000.

Table IV - Firm Energy Requirement Within Provinces (Page 27): In contrast to the decline in the rates of growth forecast for net generating capability and firm pow peak load for the next four years, firm energy requirement is expected to rise 33. per cent between 1958-1962 compared with an actual increase of 29.4 per cent between 1954 and 1958. The eight-year increase of 73.1 per cent forecast for all Canada compares with a rise of 199.9 per cent forecast for Saskatchewan, 159.5 per cent for Alberta and 140.8 per cent for British Columbia.

<u>Table V - Indicated Reserve (Page 28)</u>: This table shows the relationship between the demand for power and the ability to meet it in each of the provinces and in Canada as a whole. Demand on the province consists of firm power peak load within the province plus any indicated shortage or rejected load plus firm power deliveri

outside the province. Gross capability consists of net generating capability (hydro and thermal) within the province plus purchases of firm power under firm obligation from sources outside the province. The difference between gross capability and firm lemand is the indicated reserve, and this, expressed as a percentage of total firm lemand, can be used as a measurement of the industry's ability to satisfy demand and leet contingencies.

For Canada as a whole the reserve is expected to rise from a low of 6.9 er cent in 1956 to a high of 27.8 per cent in 1960 and then decline to 18.6 per ent in 1962. In 1958, it rose to 19.1 per cent from the year earlier figure of 9.2 er cent. Reserves for individual provinces in 1958 varied from a high of 62.5 per ent in Prince Edward Island to a low of 11.4 per cent in Ontario. Since not all ystems are fully interconnected it should be remembered that reserves of power annot always be completely utilized.

harts: On pages 6 to 12, five charts are presented to show results of the survey f the electric power industry in Canada in graphic form.

nart A - Net Generating Capability Within Canada (Page 6): This chart portrays the apid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important. Total thermal generation is expected to acrease from 1,609,000 kilowatts or 12.1 per cent of the net generating capability within Canada in 1954 to 5,494,000 kilowatts or 22.9 per cent in 1962.

Chart B - Net Capability and Firm Demand Within Canada (Page 7): Chart B provides a indication of the reserves available to meet firm demand for electric power thin Canada.

Cart C - Net Generating Capability Within Provinces (Pages 8 - 9): Chart C illustrates the growth in capability and the comparative importance of hydro and thermal eneration within provinces.

Cart D - Net Capability and Firm Demand Within Provinces (Pages 10 - 11): This cart provides a graphic indication of the year to year ability of each of the povinces to meet its firm demand for electric power.

Cart E - Firm Energy Requirement Within Canada (Page 12): Chart E shows the growth Canadian firm energy requirement during the period 1950 - 1962.



DEFINITIONS

ET GENERATING CAPABILITY

The maximum net kilowatt output (after station service) available from the enerating facilities of the UTILITY, SYSTEM or INDUSTRIAL ESTABLISHMENT with all quipment available, at the time of the annual FIRM POWER PEAK LOAD, determined as ne average kilowatt output for one hour with no allowance for outages of generating nits.

IRM POWER

Maximum power always to be available, short of major outages caused by corm, explosion, strikes, etc.

RM OBLICATIONS

Shall include only maximum commitments under contract agreements to accept deliver power on an irrevocable basis.

T CAPABILITY

The sum of net generating capability and purchases of firm power under rm obligation from other utilities less deliveries of firm power under firm oblition to other utilities.

RM POWER PEAK LOAD

The annual FIRM POWER maximum average net kilowatt load of one hour duraon within the UTILITY, SYSTEM or INDUSTRIAL ESTABLISHMENT.

DICATED DEMAND

The sum of firm power peak load and indicated shortage

DICATED RESERVE

Net capability less indicated demand (+ or -).

STEM

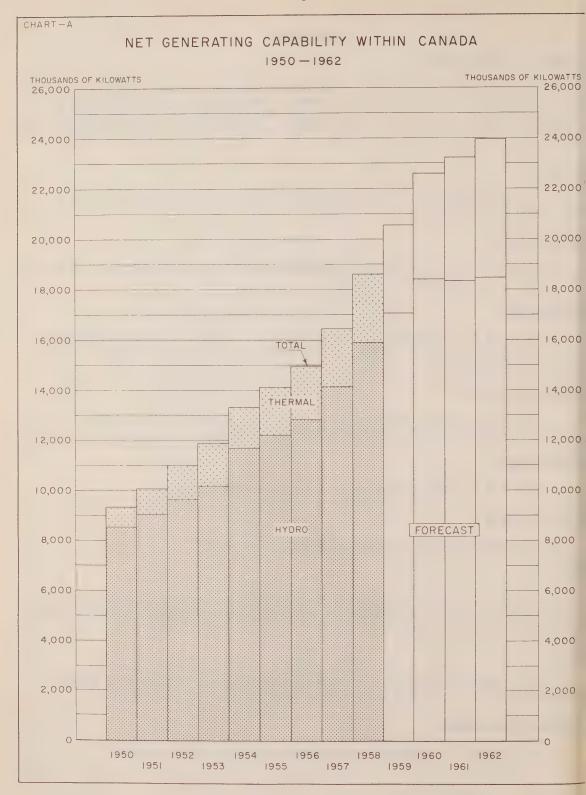
Two or more UTILITIES, having interconnections for the exchange of power, lch although they may be separately incorporated, are controlled, managed or opered by one principal UTILITY.

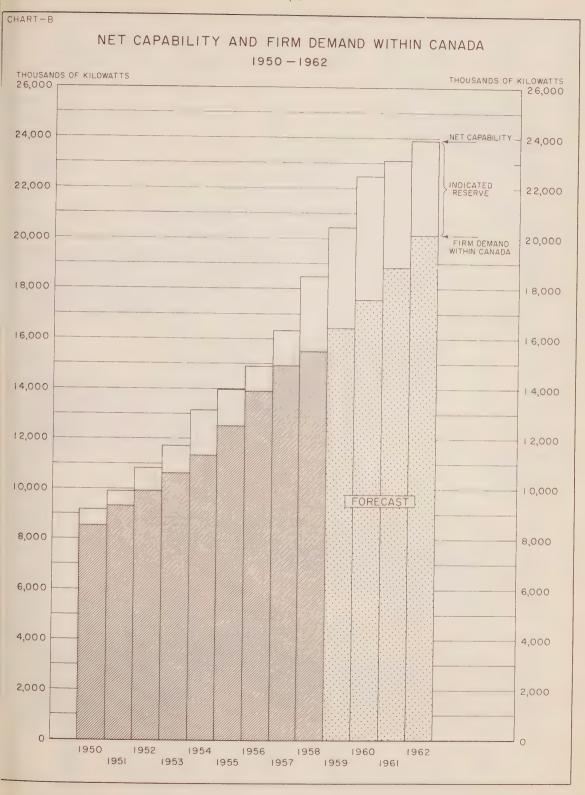
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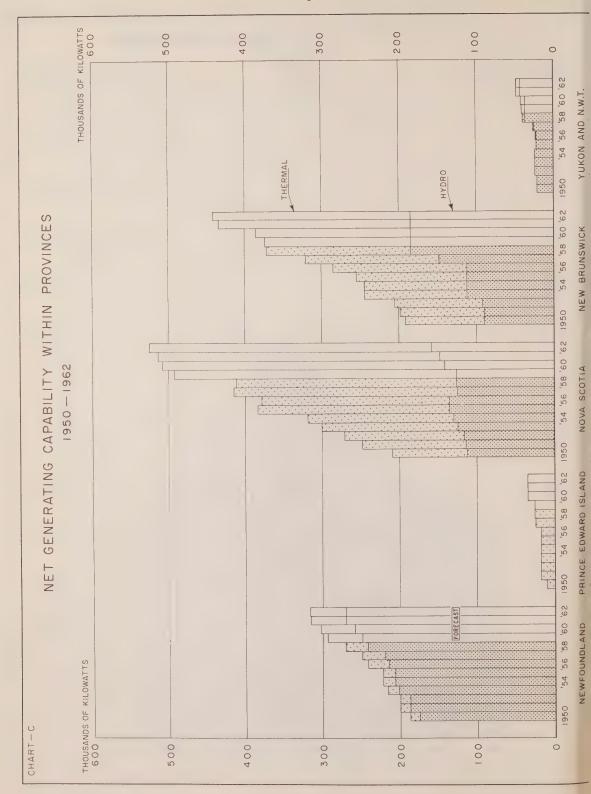
The Company, Commission, or UTILITY reporting or included in a SYSTEM port under Section IV (which generates at least part of its own power).

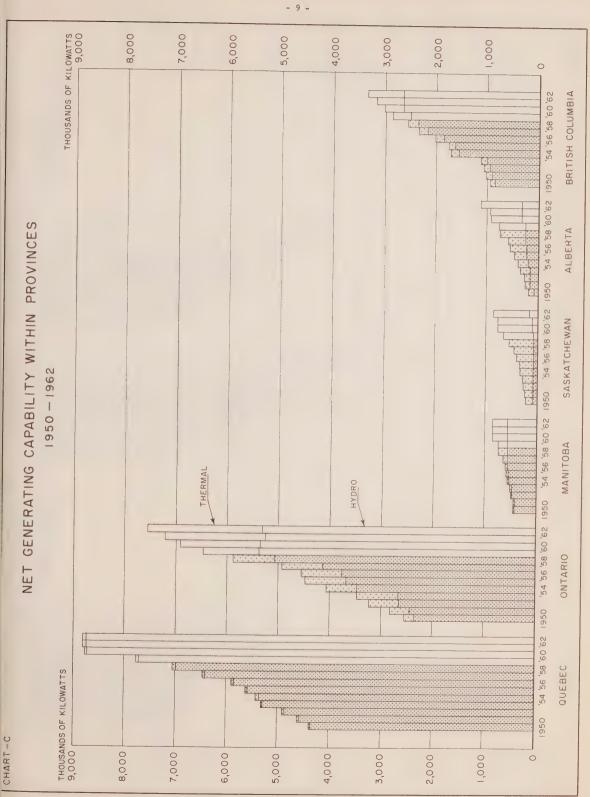
USTRIAL ESTABLISHMENT

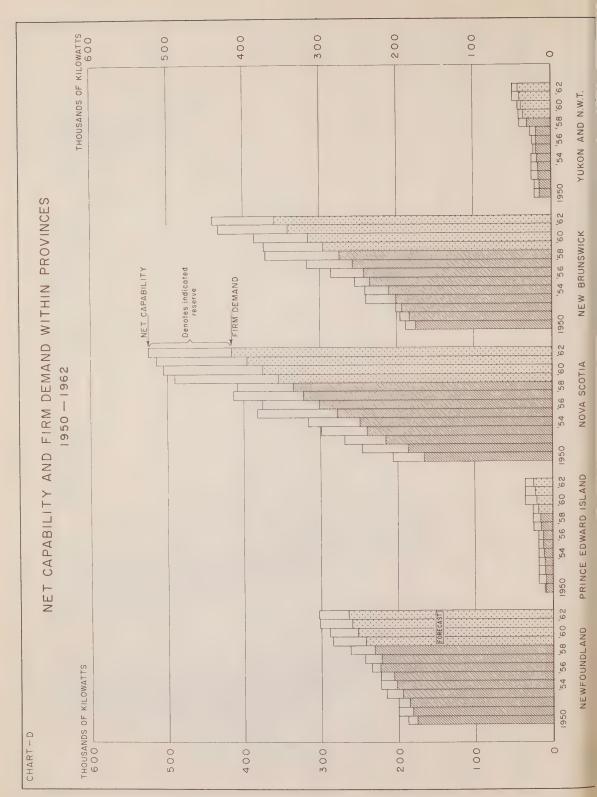
A firm which generates power primarily for use in own plants.

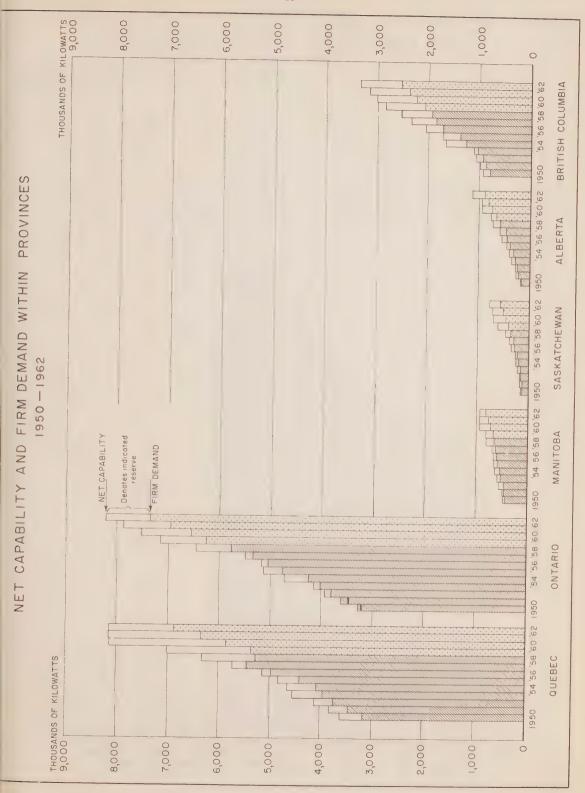


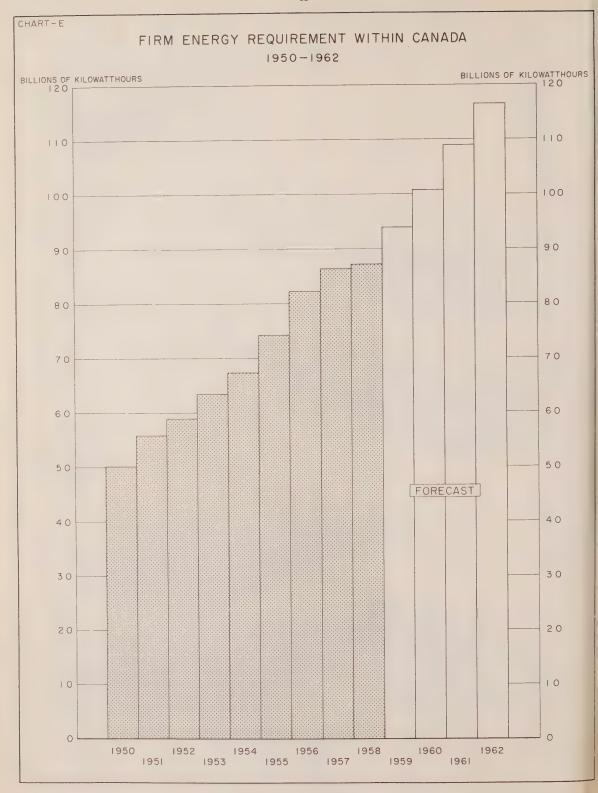












SUMMARY - CANADA

	1950	1953	1954	1955	1956	1957	1958		FOR	ECAST	
GAPABILITY:								1959	1960	1961	1962
1. Net generating capability:											
(a) Hydro (b) Thermal	8,575	10,183	11,719	12,211	12,841	14,143	15,912	17,074	18,419	18,376	18,505
2. Receipts of firm power from:				2	717 (7	7,320	7,/10	3,512	4,218	4,855	5,494
(a) Other provinces (b) United States	1 1	1 1	14	\$ 10	1 12		ŧ	2	ŧ	f	
3. Deliveries of firm power to:					}		1	1	r	4	1
(a) Other provinces(b) United States	176	177	176	166	147	150	152	152	152	1 70	1 \
4. Net capability (1 + 2 - 3)	9,187	11,726	13,156	13,986	14,892	16,319	18,476	20,434	22,485	23,125	23.893
				ACTUAI	L				FORE	CA	
FIRM POWER PEAK LOAD:											13
5. Within Canada	8,313	10,553	11,355	12,472	13,870	14,923	15,485	16 433	17 566	0	
6. Indicated shortage	217	80	4	99	747	. 7	1		77,300	799,07	20, 137
7. Indicated demand within Canada (5 + 6)	8,530	10,633	11,359	12,536	13,917	14,925	15,485	16.433	17 566	1 0 01	1 0
INDICATED RESERVE:										10,04/	20,13/
8. Difference (4 - 7)	+ 657	+1,093	+1,797	+1,450	+ 975	+1,394	+2,991	+4,001	+4,919	+4,278	+3,756
FIRM ENERGY REGISTERATIVE				MIL	LIONS	OF KIL	OWATT	HOURS			
9. Firm energy requirement within Canada	49,635	63,437	67,331	73.754	80 679	200	0000				
10. Indicated shortage	378	e	11	378	1,546	580	93	93,841	100,971	109,060	116,545
 Indicated firm energy requirement within Canada (9 + 10) 	50,013	63,440	67,342	74,132	82.225	86 333	27 173			5	1
12. Deliveries of firm energy to:							Circo	77,04I	100,971	109,060	116,545
(a) Other provinces(b) United States	1,418	1,378	1,357	1,332	1,226	1,172	1,264	1,225	1 600	1 17	1 1
	1,418	1,378	1,357	1,332	1,226	1,172	1,264	1.225	1 223	747	043
13. Firm energy requirement on Canada (11 + 12)	51,431	64,818	68,699	75,464	83,451	87,505	88,437	95.066	701 201	110 001	040
									102,174	110,007	117,390

TABLE

Thousands of kilowatts

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		4 4		1 4			2000		FORE	CAST	
	1950	1953	1954	1955	1956	1957	1938	6561	1960	1961	1962
CAPABILLITY:											
1. Net generating capability:											
(a) Hydro (b) Thermal	176	202	207	207	215	220	243	249	258	271 45	271 46
2. Receipts of firm power from:											
(a) Other provinces (b) United States	1.1	E 0		1 1		t 1	1 1	1 (1 1	1 1	1 1
3. Deliveries of firm power to:											
(a) Other provinces (b) United States		1 1	1 1		9 г	ЭI	∞ 1	∞ 4	14	14	14
4. Net capability (1 + 2 - 3)	188	217	223	223	236	243	263	286	289	302	303
				ACTUA	L				FORE	CAST	- 14
FIRM POWER PEAK LOAD:						-					-
5. Within province	177	195	201	206	222	222	231	242	252	260	265
6. Indicated shortage		•	1	1	2	1		1	t	1	1
7. Indicated demand within province (5 + 6)	177	195	202	207	224	727	231	242	252	260	265
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 11	+ 22	+ 21	+ 16	+ 12	+ 21	+ 32	+ 44	+ 37	+ 42	+ 38
	and the state of t			MILL	OSNOI	F KILO	WATTH	OURS			
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within province	1,058	1,190	1,225	1,289	1,374	1,333	1,320	1,366	1,482	1,562	1,676
10, Indicated shortage	В	1	6	10			,	,		1	
 Indicated firm energy requirement within province (9 + 10) 	1,058	1,190	1,234	1,299	1,374	1,333	1,320	1,366	1,482	1,562	1,676
12. Deliveries of firm energy to:											
(a) Other provinces (b) United States		8 8	8 1	2 4	31	794	777	- 56	880	101	101
(c) Total (a + b)	8		z		31	97	44	95	88	101	101
13. Firm energy requirement on the province (11 + 12)	1,058	1,190	1,234	1,299	1,405	1,379	1,364	1,422	1,570	1,663	1,777
			-				-	The state of the s	and and designations of Committees.	Sales September 1 September 1 September 1	STATISTICS OF THE REAL PROPERTY.

TABLE I

SUMMARY - PRINCE EDWARD ISIAND

WOTET GREAT TOWN

9	2	\$004	1900	1936	1957	1958	1959		1961	1962
capability: "p power from: .nces .es .iim power to: .nces .es .es .es .es .es .es .es .es .es .	2						1959	4000	1961	1962
capability: The power from: The power to: The po	1							1960		
n power from: .nces .es .itm power to: .nces .es .til + 2 - 3)	* ;									
inces inces is power to: itm power to: (1 + 2 - 3)	18	- 00	- 60	1 &	, c	1 8	1)	* ;	ε	1
nees es itm power to: nees (1 + 2 - 3)			;	2	7	07	70	36	36	36
itm power to: nces es (1 + 2 - 3)		1 1	r 1	1 1			1	,		1
nces es (1 + 2 - 3) ==							1	1	ı	•
(1 + 2 - 3)	1 1	1 1		l t		1 (ı	1	1	1
FIRM POWER PEAK LOAD:	18	18	1.8	18	25	26	26	36	36	36
FIRM POWER PEAK LOAD:			ACTUAL					FOREC	S. A	
										15
5. Within province	10	rel rel	22	12	14	Ž.	0	č		
6. Indicated shortage	,	,	ŧ				07	17	. 22	24
7. Indicated demand within province (5 + 6) 8	10	11	12	12	14	16	. 00	1 10	1 00	1 6
INDICATED RESERVE:								77	77	47
8. Difference (4 - 7) + 2	8 +	L +	9 +	9 +	+ 11	+ 10	∞ +	+ 15	+ 14	+ 12
FIRM ENERGY REQUIREMENT.			MILLI	ONSOF	KILOW	ATTHO	OURS			
9. Firm energy requirement within province	41	97	<u>.</u>	r S	C V					
10. Indicated shortage			ę ,	3 1	20 1	0	76	98	96	107
11. Indicated firm energy requirement within province (9 + 10)	41	947	51	53	09	200	76	,		'
12. Deliveries of firm energy to:							0/	00	96	107
(a) Other provinces (b) United States	1 1	1 1	1 1	1 1	1 1	1 1	ı	í	1	1
(c) Total (a + b)		3	1	1					1	1
13. Firm energy requirement on the province (11 + 12)	,							1	4	1
	14	949	51	53	09	69	76	86	96	107

SUMMARY - NOVA SCOTIA

Thousands of kilowatts

		6		ti Li	0	1067	or or		FOREC	AST	
	1950	1953	1954	1955	1956	1957	1900	1959	1960	1961	1962
CAPABILITY:											
1. Net generating capability:											
(a) Hydro (b) Thermal	113	124 176	130	136 248	136 242	126 289	127 284	127	142 366	148 366	. 366
2. Receipts of firm power from:											
(a) Other provinces (b) United States	t 1	1 1	4 1		1 1	1 1	1 1	1 1	1 1	1 1	1)
3. Deliveries of firm power to:											
(a) Other provinces (b) United States	- 2	- 13	27 1	- 5	- 2	2 1	က၊	m 1	. 3		1 1
4. Net capability $(1 + 2 - 3)$	207	298	316	382	376	413	408	760	505	514	525
				ACTUA	ı				FORE	CAST	- 16
FIRM POWER PEAK LOAD:											-
5. Within province	163	235	245	278	301	322	335	354	375	395	417
6. Indicated shortage	4	4	3	B	1	2	1	,	1	1	1
7. Indicated demand within province (5 + 6)	167	239	248	278	301	322	335	354	375	395	417
INDICATED RESERVE:	07 +	ф †	+	+104	+ 75	+ 91	+ 73	+136	+130	+119	+108
DILIERENCE (4				MILL	0 1	[m;	H	OURS			
FIRM ENERCY REQUIREMENT:											
9. Firm energy requirement within province	891	1,211	1,277	1,357	1,486	1,466	1,581	1,613	1,725	1,816	1,912
10. Indicated shortage		1	1	1		1	-	1	4		•
11. Indicated firm energy requirement within province (9 + 10)	891	1,211	1,277	1,357	1,486	1,466	1,581	1,613	1,725	1,816	1,912
12. Deliveries of firm energy to:											i
(a) Other provinces(b) United States	91	7 -	7	οО I	∞ ι	CO 1	10	11	12	13	14
(c) Total (a + b)	9	7	7	Φ	00	8	10	11	12	13	14
13. Firm energy requirement on the province (11 + 12)	897	1,218	1,284	1,365	1,494	1,474	1,591	1,624	1,737	1,829	1,926

MANUEL TOWER SURVEY OF CAPABILLIY AND LOAD

TABLE I

SUMMARY - NEW BRUNSWICK

	1950	1053	7 20 5	L L					FORE	ECAST	
		CCCT	1934	1955	1956	1957	1958	1000	}		
CAPABILITY:								1939	1960	1961	1962
1. Net generating capability:											
(a) Hydro (b) Thermal	90	112	112	112	112	148	185	185	185	185	185
2. Receipts of firm power from:					ì		101	100	707	249	256
(a) Other provinces (b) United States	C 1	1 2	- 2	4 1	v) i	٠.	œ	6	6	7	7
3. Deliveries of firm power to:							1	1	•	t	ı
	- 72	1 9	; L/S	ιΩ	1 1/2	1 00	1 0	10	1 6	1 00	1 00
4. Net capability (1 + 2 - 3)	189	240	241	255	286	318	371	373	386	433	0777
				ACTUA	ī				FORE	CAST	
FIRM POWER PEAK LOAD:											17
5. Within province	177	201	210	235	243	258	273	296	317	341	360
6. Indicated shortage		1	1	٦	1		4	,			
7. Indicated demand within province (5 + 6)	177	201	210	236	243	258	273	296	317	341	360
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 12	+ 39	+ 31	+ 19	+ 43	09 +	+ 98	+ 77	69 +	+ 92	+ 80
				MILL	IONS O	F KILO	WATT H	OURS			
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within province	961	1,044	1,189	1,237	1,262;	1,389*	1,444	1,527	1,680	1,825	1.944
10. Indicated shortage		1	,	,	ě	,	ı	t		1	-
ll. Indicated firm energy requirement within province $(9 + 10)$	961	1,044	1,189	1,237	1,262	1,389	1.444	1 527	089	100	
12. Deliveries of firm energy to:								13061	2000	1,023	1,944
(a) Other provinces (b) United States	- 77	36	1 65	33	32	29	63	97	777	- 77	1.5
(c) Total (a + b)	41	36	59	33	32	29	63	97	77	- 73	
13. Firm energy requirement on the province (11 + 12)	1,002	1,080	1,248	1,270	1,294	1.418	1 507	1 573	700 1		7
* Revised.						27.6	10017	1,0/0	1, / 24	1,868	1,985

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									FORE	CAST	
	1950	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
CAPABILITY:											
1. Net generating capability:											
(a) Hydro (b) Thermal	4,370	5,300	5,378	5,583	5,854	6,406	6,992	7,700	8,812	8,824	8,824
2. Receipts of firm power from:											
(a) Other provinces (b) United States	- 1	e-l 1	H 4	L 12	7	7	O 1	0 1	16	16	16
3. Deliveries of firm power to:											
(a) Other provinces* (b) United States	732 56	737 56	719 56	729	691	969	673	703	704	707	709
4. Net capability $(1 + 2 - 3)$	3,609	4,543	4,643	4,840	5,154	5,718	6,332	7,010	8,128	8,147	8,145
				ACTUA	ı				FORE	CAST	- 1
FIRM POWER PEAK LOAD:											.8 -
5. Within province	3,174	3,951	4,092	4,367	4,951	5,475	5,292	5,379	5,856	6,362	6,884
6. Indicated shortage		4	1	7/7	777	2	1	ŀ	1	1	1
7. Indicated demand within province (5 + 6)	3,174	3,955	4,092	4,411	4,995	5,477	5,292	5,379	5,856	6,362	6,884
INDICATED RESERVE:											
8. Difference $(4 - 7)$	+ 435	+ 588	+ 551	+ 429	+ 159	+ 241	+1,040	+1,631	+2,272	+1,785	+1,261
				MILL	IONS	OF KILO	WATTH	OURS			
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within province	20,442	26,711	27,954	29,479	31,088	31,845	31,491	32,767	36,148	40,086	43,436
10. Indicated shortage	123	1	1	362	1,546	540	1	:	t	'	1
11. Indicated firm energy requirement within province $(9+10)$	20,565	26,712	27,955	29,841	32,634	32,385	31,491	32,767	36,148	40,086	43,436
12. Deliveries of firm energy to:											
(a) Other provinces*(b) United States	4,425	4,434	4,331	4,260	4,117	4,075	3,971	3,979	3,987	3,989	3,991
(c) Total (a + b)	4,915	4,924	4,821	4,750	4,608	4,560	4,461	4,469	4,477	4,479	4,481
13. Firm energy requirement on the province (11 + 12)	25,480	31,636	32,776	34,591	37,242	36,945	35,952	37,236	40,625	44,565	47,917

TABLE I

SUMMARY - ONTARIO Thousands of kilowatts

	1950	1953	1954	1955	1956	1957	1958		FOR	ECAST	
CAPBILITY:								1959	1960	1961	1962
1. Net generating capability:											
(a) Hydro (b) Thermal	2,367	2,684	3,481	3,688	3,778	4,145	5,081	5,381	5,350	5.267	r.
2. Receipts of firm power from:				000	/8/	787	800	1,181	1,561	1,960	2,245
(a) Other provinces*(b) United States	741	746	732	741	702	658	899	697	869	700	200
3. Deliveries of firm power to:				5		F	1	ı		2 '	707
	85	1 85	85	85	1 86	3 8 8	86 13	1 86	27 00	2	2
4. Net capability (1 + 2 - 3)	3,221	4,153	4,734	5,143	5,180	5,503	6,462	7,172	7,521	7,884	8,222
FIRM POWER PEAK LOAD.				ACTUA	A L				FORE	CAST	
5. Within province	3 0 2 0	0									19 -
6. Indicated shortage	213	3,309	4,261	4,757	5,064	5,369	5,794	6,279	6,565	6,961	7,354
7. Indicated demand within province (5 + 6)	3.291	000 9	1 26 7	07	1	5		1		1	1
INDICATED RESERVE:			4,201	4,//5	5,064	5,369	5,794	6,279	6,565	6,961	7,354
8. Difference (4 = 7)	- 70	+ 124	+ 473	+ 368	+ 116	+ 134	+ 668	+ 893	+ 956	+ 923	+
FIRM ENERGY REQUIRENENT:				MILL	I O N S	OF KILO	WATT H	OURS			
9. Firm energy requirement within province	18,016	22,985	23,928	378 30	0000	6					
10. Indicated shortage	255	2	1	9	670,07	30,768	31,401	35,085	36,779	38,692	40,989
<pre>11. Indicated firm energy requirement within province (9 + 10)</pre>	18,271	22,987	23,929	26,382	28.875	30 768	21 707	1 1	1	1	1
12. Deliveries of firm energy to:							31,401	32,085	36,779	38,692	40,989
(a) Other provinces (b) United States	703	9999	3 624	687	703	4 658	711	5 689	689	5 414	5 21%
13. Firm anaron mandare.	705	671	627	069	707	662	716	769	769	419	319
province (11 + 12)	18,976	23,658	24,556	27,072	29,582	31,430	32,117	35 770	27,70		
" includes deliveries received from Cedars on a short	Ort town hoof.							203112	0/+1/0	39,111	41,308

" Includes deliveries received from Cedars on a short term basis.

TABLE I

SUMMARY - MANITOBA

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FORECAST		1960 1961 1962			566 566 566 294 294 294		74 74 74		1 1	934 934 934	FORECAST		730 770 811	4	730 770 811	+ 204 + 164 + 123			4,052 4,303 4,504	1	4,052 4,303 4,504			•	
		1959			566		7.2		1 1	806			688	ı	688	+ 118	HOURS		3,796	1	3,796		1 1	1	
	1958				566		89 1		1 1	802			979	5	979	+ 156			3,557		3,557		1 1	1	
	1957				561 78		69		14	769			809		909	98	Z I Z		3,435	1	3,435		136	136	
	1956				556 46		79		14	652	A L		909	-	605	+ 47	S		3,414	í	3,414		76	96	
	1955				547		79		14	658	ACTU		594	•	594	79 +	I I		3,122	,	3,122		114	114	
	1954				522 46		80		13	635			533	1	533	+ 102	707		2,886	t	2,886		114	114	
	1953				487		79		6 1	580			512	1	512	4			2,705	1	2,705		79	79	
	1950				418		90 1		o I	487			419	1	419	α 4	H.		2,218	•	2,218		79	79	
			CAPABILITY:	1. Net generating capability:	(a) Hydro (b) Thermal	2. Receipts of firm power from:	(a) Other provinces (b) United States	3. Deliveries of firm power to:	(a) Other provinces (b) United States	4. Net capability (1 + 2 - 3)		FIRM POWER FFAK LOAD:	5. Within province	6. Indicated shortage	7. Indicated demand within province (5 + 6)	INDICATED RESERVE:	o. Dirierence (4 - /)	FIRM ENERGY REQUIREMENT:	9. Firm energy requirement within province	10. Indicated shortage	 Indicated firm energy requirement within province (9 + 10) 	12. Deliveries of firm energy to:	(a) Other provinces (b) United States	(c) Total (a + b)	

TABLE I

SUMMARY - SASKATCHEWAN

order of his last

	1950	1953	1954	1955	1956	1957	105.8		FOR	ECAST	
CAPABILITY:				And the second of the second o				1959	1960	1961	1962
1. Net generating capability:											
(a) Hydro (b) Thermal	85 129	85	85	82 257	320	87	87	87	107	107	174
2. Receipts of firm power from:					275	0/0	704	584	670	029	029
(a) Other provinces (b) United States	1.1	1 1	1 1		,	1	1	2	,	•	r
3. Deliveries of firm power to:				1	ı	ı	1	1	ı	1	
(a) Other provinces (b) United States	89 1	79	80	79	79	72	891	72	74	74	74
4. Net capability (1 + 2 - 3)	146	203	248	260	338	391	471	601	703	703	1 000
				ACTUA	L				D	0 4 0	0//
FIRM POWER PEAK LOAD:									4	n V	21
	128	169	196	227	278	299	353	405	057	o d	t
6. Indicated shortage	1	,	1	,	1		1	,	000	200	555
7. Indicated demand within province (5 + 6)	128	169	196	227	278	299	353	507	1 0	1 (
INDICATED RESERVE:										200	222
8. Difference (4 = 7)	+ 18	+ 34	+ 52	+ 33	09 +	+ 92	+ 118	+ 196	+ 253	+ 203	+ 215
FTRM RNER CV DECHIODAGENTE.				MILL	1 0 N S 0	F KILO	WATT H	OURS			
9. Firm energy requirement within province	405	629	742	877	7,70	200 1					
10. Indicated shortage	•	•	1	•	1011	1,2/0	1,422	1,623	1,814	2,025	2,225
11. Indicated firm energy requirement within province (9 + 10)	405	629	742	877	1 04.7	276 1	1 0				1
12. Deliveries of firm energy to:					1,011	1,2/0	1,422	1,623	1,814	2,025	2,225
(a) Other provinces (b) United States	200	559	558	571	554	503	504	523	523	553	553
(c) Total (a + b)	200	559	558	571	554	503	70%	1 000	1 6	a .	•
13. Firm energy requirement on the							\$00°	523	523	553	553
Province (11 + 12)	905	1,188	1,300	1,448	1,601	1,779	1,926	2,146	2,337	2.578	2 778

TABLE I

SUMMARY - ALBERTA

		1962			800	~	r i			1,122	- 22	-	880	'	880	+ 242		4,103	1	4,103		٠	1	t	4,103
	AST	1961			518	`	ו ל		1 1	936	AST		800	•	800	+ 136		3.727	1	3,727		,	•	5	3,727
	FOREC	1960			318	,	1 t		, ,	924	FOREC		722	,	722	+ 202		3,382		3,382		ı	\$	1	3,382
		1959			238 530		7 1		- 2	770			959	1	654	+ 116	OURS	3 054		3,054		1	-		3,054
		1958			238		4 1		٦.	737			580	1	580	+ 157	WATT H	2 760	1	2,760		ı		,	2,760
		1957			350		ıt		1 1	592			9/4	ı	927	+ 116	F KILO	767 6		2.424		•	2	4	2,424
		1956			338		4 1		1 1	562			451	,	451	+ 111	ONSO	0	7,100	2.180		1		1	2,180
Thousands of kilowatts		1955			220				с ι	455	ACTUAL		391		391	+ + + + + + + + + + + + + + + + + + + 	MILLI		1,859	1 859		ı	1	1	1,859
Thousands		1954			202		4 1		1 1	400			313	,	313	+ 87			1,581	1 581			•	1	1,581
		1953			162 187		1 1		∞ 1	341			284	1	284	+ 57			1,372	070		9	-	9	1,378
		1950			83		1 1		пι	188			176		176	+ 12			1,023		2004	14		14	1,037
			CAPABILITY:	1. Net generating capability:	(a) Hydro (b) Thermal	2. Receipts of firm power from:	(a) Other provinces (b) United States	3. Deliveries of firm power to:	(a) Other provinces	// Not canability (1 + 2 = 3)	Mer capatitation and	TANK DAKED DEAT I CAD.	FIRST COMEA LIGHT LAND.					FIRM ENERGY REQUIREMENT:		10. Indicated Shorteger requirement		12. Deliveries of firm energy to:	(a) United States	(c) Total (a + b)	13. Firm energy requirement on the province (11 + 12)

TABLE I

SUMMARY - BRITISH COLUMBIA

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	1950	1953	1954	1955	1956	1957	8501		FOR	ECAST	
							0000	1959	1960	1961	1962
CAPABILITY:											700
l. Net generating capability:											
(a) Hydro (b) Thermal	852	1,003	1,578	1,614	1,866	2,187	2,356	2,504	2,644	2,647	2,647
2. Receipts of firm power from:						004	717	900	377	545	705
(a) Other provinces(b) United States	က၊	∞ ₁	1 1	m 1	- 22	ē į	,	1	1	*	,
3. Deliveries of firm power to:					1	•	ŧ	1	ı	1	1
(a) Other provinces(b) United States	30	30	30	20	4 -	4 1	4 1	7	4 (4	4
4. Net capability (1 + 2 - 3)	921	1,109	1,674	1,730	2,067	2,346	2,564	2,859	3,017	3,188	3,348
				ACTUA	7				F O R	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
FIRM POWER PEAK LOAD:											23
5. Within province	799	1,010	1,275	1,386	1,724	1,861	1,935	2,083	2.240	2 306	273 6
6. Indicated shortage	4	1.2	ı	1	1	r	,			2000	2,740
7. Indicated demand within province (5 + 6)	799	1,022	1,275	1,386	1,725	1,861	1,935	2,083	2.240	2 396	275 6
INDICATED RESERVE:											2,340
8. Difference (4 - 7)	+ 122	+ 87	+ 399	+ 344	+ 342	+ 485	+ 629	+ 776	+ 777	+ 792	+ 802
FIRM ENERGY RHOUTEPINENT.				MILL	ONSUOI	FKILO	WATTH	OURS			
9. Firm energy requirement within province	4,523	5,466	6,414	8.011	803	11 67.0	*				
10. Indicated shortage	ı	ı			1 1	740 777	11,304	12,727	13,638	14,732	15,445
 Indicated firm energy requirement Within province (9 + 10) 	4,523	5,466	6,414	8,011	9.802	11.682	11 907	61		8	*
12. Deliveries of firm energy to:							166,001	12,131	13,638	14,732	15,445
(a) Other provinces (b) United States	184	184	10	10	10	م ۱	91	9 1	7 -	۲ -	7
	184	184	194	132	10	6	9	9	7	7	
13. Firm energy requirement on the province (11 + 12)	4,707	5,650	6,608	8,143	9,812	11.691	12 003	19 763	12 615	- 0	
								14,143	13,045	14,739	15,452

TABLE I

SUMMARY - YUKON AND NORTH WEST TERRITORIES

				Thousands	Thousands of kilowatts							
								, , , , , , , , , , , , , , , , , , ,		FOREC	AST	
		1950	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
CAPABILITY:												
1. Net generat	Net generating capability:											:
(a) Hydro (b) Thermal		21	24	24	22 -	22 1	25	37	37	37	£3 2	φ τ
2. Receipts of	Receipts of firm power from:											
(a) Other provinces(b) United States	rovinces States	i i	()	1 1	1 1		1 1	1 1	1 1	3 - 4		1 1
3. Deliveries	Deliveries of firm power to:											
(a) Other province (b) United States	Other provinces United States	1 1	1 1	1 1		1 1		1 1	1 1	1 1		' '
4. Net capability (1 + 2	ity (1 + 2 - 3)	21	24	54	22	23	26	04	41	42	48	48
					ACTUAL					FORE	CAST	- 24
FIRM POWER PEAK LOAD:	OAD:											
5. Within province	ince	14	17	18	19	19	19	30	35	38	07	41
6. Indicated shortage	hortage	1	1		1	,	•	1	1	•	-	1
7. Indicated d	Indicated demand within province (5 + 6)	14	17	18	19	19	19	30	35	38	07	41
-4		7			4	4	4	+ 10	9	4	∞ +	+ 7
8. Difference (4	(4 - 7)	+	+	+	7 7	0		A T T H	OURS			
FIRM ENERGY REQUIREMENT:	REMENT:											
9. Firm energy	Firm energy requirement within province	67	83	89	96	86	115	131	177	185	196	204
10. Indicated shortage	hortage	1	1	1	1	•		1	1	1	1	1
11. Indicated f	Indicated firm energy requirement within province $(9 + 10)$	29	83	89	96	98	115	131	177	185	196	204
12. Deliveries	Deliveries of firm energy to:											
(a) Other provinces(b) United States	provinces	1 1		1 4	g \$	1 1	1 1		1 1	1 1) 1	1 1
(c) Total (a + b)	(a + b)	•		1	1	1		1		1	-	•
13. Firm energy province (1	Firm energy requirement on the province (11 + 12)	67	83	89	96	86	115	131	177	185	196	204

TABLE II

NET GENERALING CAPABILITY WITHIN PROVINCES*

PROVINCE	1950	1953	1954	100	1056	140	0		FORE	CAST		PER	PERCENTAGE CHANGE	ANGE
				COCT	1900	1997	1958	1959	1960	1961	1962	1954-	1958- 1962	1954-
Newfoundland (including Labrador)	188	217	223	223	242	249	271	294	303	316	317	21.5	17.0	42.2
Prince Edward Island	10	18	100	18	18	25	26	26	36	36	36	4.44	38,5	100.0
Nova Scotia	209	300	318	384	378	415	411	493	508	514	525	29.2	27.7	65.1
New Brunswick	192	244	244	256	286	321	372	373	386	434	441	52.5	18,5	80.7
Quebec	4,396	5,335	5,413	5,619	5,890	6,461	7,053	7,761	8,873	8,895	8,895	30,3	26.1	25 - 25
Ontario	2,566	3,493	4,088	4,488	4,565	4,932	5,881	6,562	6,911	7,227	7,563	43.9	28.6	85.0
Manitoba	428	510	568	593	602	639	734	734	860	860	860	29°5	17.2	51.4
Saskatchewan	214	282	328	339	402	463	538	671	777	777	7778	64.0	56.9	157.3
Alberta	191	349	396	458	558	588	734	768	920	932	1,118	85.4	52.3	182,3
British Columbia	948	1,131	1,708	1,747	2,019	2,350	2,568	2,863	3,021	3,192	3,352	50.4	30.5	96.3
Yukon and N.W.T.	21	24	24	22	23	26	40	41	42	8 7	87	66.7	20.0	100.0
САКАДА	9,363	11,903	13,328	14,147	14,983	16,469	18,628	20,586	22,637	23,231	23,999	39.8	28.8	80,1

^{*} Hydro plus thermal (Table I, item l a + i b).

TABLE III

FIRM POWER PEAK LOAD WITHIN PROVINCES*

; ; ;	C L	6							FORE	C A S T		PERC	PERCENTAGE CHANGE	NGE
r r c r r r c r	1950	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1954-	1958- 1962	1954- 1962
Newfoundland (including Labrador)	177	195	202	207	224	222	231	242	252	260	265	14.4	14.7	31.2
Prince Edward Island	ω	10	11	12	12	14	16	18	21	22	24	45.5	50.0	118.2
Nova Scotia	167	239	248	278	301	322	335	354	375	395	417	35.1	24.5	68.1
New Brunswick	177	201	210	236	243	258	273	296	317	341	360	30.0	31.9	71.4
Quebec	3,174	3,955	4,092	4,411	4,995	5,477	5,292	5,379	5,856	6,362	6,884	29.3	30.1	26 - 2.89
Ontario	3,291	4,029	4,261	4,775	5,064	5,369	5,794	6,279	6,565	6,961	7,354	36.0	26.9	72.6
Manitoba	419	512	533	594	909	809	979	889	730	770	811	21.2	25.5	52.2
Saskatchewan	128	169	196	227	278	299	353	405	450	200	555	80.1	57.2	183.2
Alberta	176	284	313	391	451	927	580	654	722	800	880	85,3	51.7	181.2
British Columbia	799	1,022	1,275	1,386	1,725	1,861	1,935	2,083	2,240	2,396	2,546	51.8	31.6	7.66
Yukon and N.W.T.	14	17	18	19	19	19	30	35	38	40	41	66.7	36.7	127.8
CANADA	8,530	10,633	11,359	12,536	13,917	14,925	15,485	16,433	17,566	18,847	20,137	36.3	30.0	77.3
* Indicated Firm Demand (Table I. item 7).	item 7).													

FIRM ENERGY REQUIREMENT WITHIN PROVINCES*

Millions of Kilowatt Hours

27 - 7:55 35.8 132.6 1954-63.5 49.7 71.3 56.1 199.9 159.5 140.8 129.2 73,1 PERCENTAGE CHANGE 1958-27.0 55.1 20.9 34.6 30.5 37.9 26.6 56,5 48.7 28.7 55.7 33.7 50.0 23.8 7.0 1954-21.4 12.6 31.2 23,3 91.6 74.6 87.0 47.2 29.4 1,676 1,912 1,944 107 43,436 40,989 1962 4,504 2,225 4,103 15,445 204 116,545 1,562 1,816 1,825 96 40,086 1961 4,303 2,025 3,727 38,692 FORECAST 196 109,060 1,482 1,725 1,680 36,148 86 36,779 1960 4,052 1,814 3,382 13,638 185 100,971 1,366 1,613 97 1,527 32,767 35,085 1959 3,796 1,623 3,054 12,757 177 93,841 1,320 1,581 69 1,444 31,491 31,401 3,557 1958 1,422 2,760 11,997 87,173 1,333 09 1,466 1,389 32,385 3,435 1957 30,768 1,276 2,424 11,682 86,333 115 1,374 1,486 53 1,262 28,875 1956 3,414 1,047 2,180 82,225 9,802 98 1,299 1,357 51 29,841 26,382 1955 3,122 1,859 8,011 74,132 877 96 1,234 1,277 1954 949 1,189 27,955 23,929 2,886 6,414 1,581 742 89 67,342 1,190 1,211 1,044 26,712 41 22,987 2,705 1953 1,372 5,466 629 63,440 83 1,058 1950 31 891 196 18,271 2,218 1,023 20,565 4,523 50,013 67 (including Labrador) Prince Edward Island PROVINCE * Table I, item 11. British Columbia Yukon and N.W.T. Newfoundland New Brunswick Saskatchewan Nova Scotia Manitoba Ontario Alberta Quebec CANADA

INDICATED RESERVE*

Kilowatts	
of	
Thousands	

									FOREC	AST		PERCE	PERCENTAGE CHANGE	35
	1950	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1954- 1958	1958 - 1962	1954-
Newfoundland (including Labrador)														:
1. Gross capability 2. Total firm demand on the province	188 177	217	223	223	242 230	249	271 239	294 250	303	316	317	21.5	17.0	38.1
	11	22	21	16	12	21	32	477	37	42	38	XXX	XXX	XXX
4. Indicated reserve expressed as a $\%$ of total firm demand	6.2	11.2	10.4	7.7	5.2	9.2	13.4	17.6	13.9	15.3	13.6	XXX	XXX	XXX
Prince Edward Island														
1. Gross capability 2. Total firm demand on the province	10	18	18 11	18	18	25	26 16	26 18	36 21	36	36	44.4	38.5	100.0
Indicated reserve (1 - 2)	2	00	7	9	9	11	10	∞	15	14	12	XXX	XXX	28 - X
4. Indicated reserve expressed as a $\%$ of total firm demand	25.0	80.0	63.6	50.0	50.0	78.6	62.5	44.4	71.4	63.6	50.0	XXX	XXX	XXX
Nova Scotia														
1. Gross capability 2. Total firm demand on the province	209	300	318 250	384	378	415	411	493	508 378	514 395	525 417	35.2	27.7	65.1
3. Indicated reserve (1 - 2)	700	59	89	104	75	91	73	136	130	119	108	XXX	XXX	XXX
	23.7	24.5	27.2	37.1	24.8	28.1	21.6	38.1	34.4	30.1	25.9	XXX	ххх	ххх
New Brunswick														
1. Gross capability 2. Total firm demand on the province	194	246	246	260 241	291 248	326	380	382	395	441	368	54.5	17.9	82.1
3. Indicated reserve (1 - 2)	12	39	31	19	67	09	98	77	69	92	80	ххх	XXX	XXX
4. Indicated reserve expressed as a $\%$ of total firm demand	9.9	18.8	14.4	7.9	17.3	22.6	34.8	25.2	21.2	26.4	21.7	XXX	XXX	XXX

^{*} Gross capability (Table 1, item 1 + 2) less total firm denand on the provinces (Table 1, item 7 + 3).

INDICATED RESERVE*

	0501	1053	7301						FORE	CAST		PERC	PERCENTAGE CHANGE	ANGE
			+061	6661	9067	1957	1958	1959	1960	1961	1962	1954- 1958	1958-	1954-
Ouebec														
1. Gross capability 2. Total firm demand on the province	4,397	5,336	5,418	5,625	5,901	6,468	7,062	7,770	8,889	8,911 7,126	8,911	30.3	26.2	64.5
 Indicated reserve (1 - 2) Indicated reserve expressed as a % of total firm demand 	435	588	551	429	159	241	1,040	1,631	2,272	1,785	1,261	xxx	XXX	XXX XX
Ontarlo														
1. Gross capability 2. Total firm demand on the province	3,307	4,239	4,820	5,229	5,267	5,590	6,549	7,259	7,609	7,927	8,265	35.9	26.2	71.5
3. Indicated reserve (1 - 2) 4. Indicated reserve expressed as a % of total firm demand	- 70	124	473	368	116	134	668	893	956	923	868	XXX XXX	XXX XXX	29 - XX XX
Manitoba														
1. Gross capability 2. Total firm demand on the province	496	589	979	672	619	708	802	806	934	934	934	23.8	16.5	44.1 48.5
 Indicated reserve (1 - 2) Indicated reserve expressed as a % of total firm demand 	6.8	68	102	64	47	86	156	118	204	164	123	X XXX	XXX XXX	XXX XXX
Saskatchewan														
1. Gross capability 2. Total firm demand on the province	214	282 248	328 276	339	402	463	539	673	777 524	777 574	844 629	64.3	56.6	157.3
3. Indicated reserve (1 - 2) 4. Indicated reserve expressed as a %	18	34	52	33	09	92	118	961	253	203	215	XXX	XXX	XXX
of total firm demand	20.0	16,8	21.3	12.0	17.5	24.8	28.0	41.1	48.3	35.4	34.2	XXX	XXX	XXX
					The state of the s	The second secon								

^{*} Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3).

A THOM

INDICATED RESERVE*

							-							-
									FOREC	AST		PERCEN	PERCENTAGE CHANGE	25
	1950	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1954- 1958	1958- 1962	1954-
Alberta														
1. Gross capability 2. Total firm demand on the province	191 179	349	400	458 394	562 451	592 476	738 581	772 656	924	936	1,122	84.5	52.0	180.5
3. Indicated reserve (1 - 2)	12	57	87	79	111	116	157	116	202	136	242	xxx	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	6.7	19.5	27.8	16.2	24.6	24.4	27.0	17.7	28.0	17.0	27.5	xxx	XXX	XXX
British Columbia 1. Gross capability 2. Total firm demand on the province	951 829	1,139	1,708	1,750	2,071	2,350	2,568	2,863	3,021	3,192 2,400	3,352 2,550	50.4	30.5	96.3
3. Indicated reserve (1 - 2)	122	87	399	344	342	485	629	776	777	792	802	XXX	XXX	30 - XXX
4. Indicated reserve expressed as a % of total firm demand	14.7	8.3	30.5	24.5	19.8	26.0	32.4	37.2	34.6	33.0	31.5	xxx	XXX	XXX
1. Gross capability 2. Total firm demand on the province	21 14	24 17	24 18	22 19	23	26	30	41 35	42	640	48	66.7	20.0	100.0
3. Indicated reserve (1 - 2)	_	7	9	3	47	7	10	9	4	00	7	XXX	ххх	XXX
4. Indicated reserve expressed as a % of total firm demand	50.0	41.2	33°3	15.8	21.1	36.8	33.3	17.1	10.5	20.0	17.1	XXX	XXX	XXX
CANADA														
1. Gross capability 2. Total firm demand on Canada	9,363	11,903	13,332	14,152	15,039	16,469	18,628	20,586	22,637	23,231 18,953	23,999	39.7	28.8	80.0
3. Indicated reserve (1 - 2)	657	1,093	1,797	1,450	975	1,394	2,991	4,001	4,919	4,278	3,756	XXX	XXX	XXX
4. Indicated reserve expressed as a $%$ of total firm demand	7.5	10.1	15.6	11.4	6.9	9.5	19.1	24.1	27.8	22.6	18.6	XXX	XXX	XXX

* Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3).

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The Policy Sub-Committee serves as an over-all co-ordinating agency for these urveys, the connecting link between the Dominion Bureau of Statistics, The Canadian lectrical Association and the interests of the electric power utility industry-atarge.

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Members of the Surveys Sub-Committee serve as area representatives. The function of an area representative is primarily to act as the direct liaison between the company representatives in his area and the Dominion Bureau of Statistics on all matters relating to the power survey.





CATALOGUE No. 57-204





ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

1959 Actual 1960 - 1963 Forecast

DOMINION BUREAU OF STATISTICS

Public Finance and Transportation Division
Public Utilities Section



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Public Finance and Transportation Division
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ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

1959 Actual 1960-1963 Forecast

Published by Authority of The Honourable Gordon Churchill, Minister of Trade and Commerce

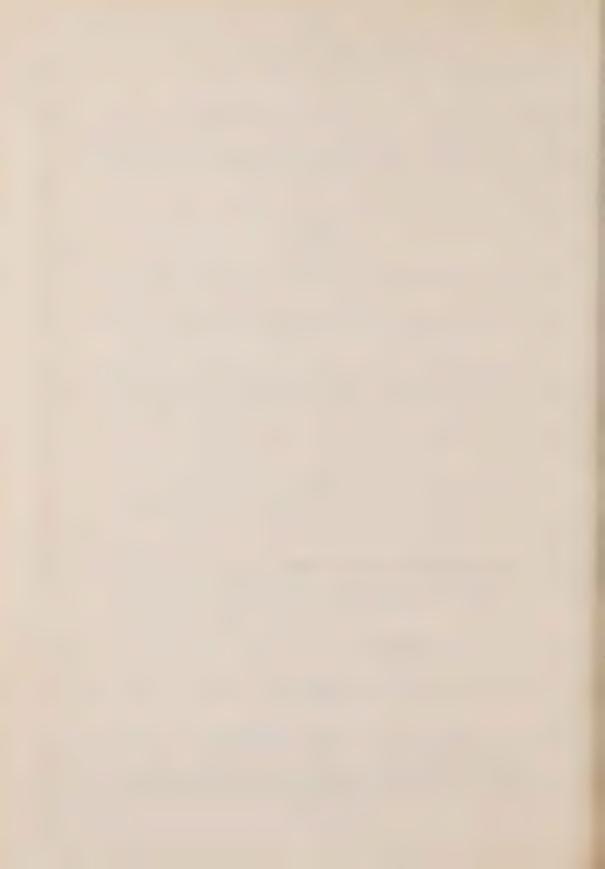
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amount used in electric boilers, by provinces.

TABLE OF CONTENTS

		Page
Intr	coduction	1
Revi	lew of Survey Results	2
Defi	nitions	4
	<u>CHARTS</u>	
A:	Net Generating Capability within Canada, 1950 through 1963	6
В:	Net Capability and Firm Demand within Canada, 1950 through 1963	7
C:	Net Generating Capability within Provinces, 1950 through 1963	8
D:	Net Capability and Firm Demand within Provinces, 1950 through 1963	10
Е:	Firm Energy Requirement within Canada, 1950 through 1963	12
	TABLES	
I:	Summary by Provinces and Canada, 1950, 1954 through 1963	13
II:	Net Generating Capability within Provinces, 1950, 1954 through 1963	25
III:	Firm Power Peak Load Within Provinces, 1950, 1954 through 1963	26
۲۷:	Firm Energy Requirement within Provinces, 1950, 1954 through 1963	27
7:	Indicated Reserve, 1950, 1954 through 1963	28
anad	dian Electrical Association Policy Sub-Committee	31
urve	eys Sub-Committee	32



Introduction

This report presents the results of the sixth annual Electric Power Survey f Capability and Load which was conducted in March 1960 by the Dominion Bureau of tatistics in cooperation with the Canadian Electrical Association. The Electric ower Survey embraces all producers of electric energy in Canada which generate 0,000,000 kilowatt hours or more per annum. The 1960 report is based on returns rom 130 companies, half of which are utilities and the other half industrial estabishments which generate power primarily for own use. As these 130 producers account or approximately 99 per cent of total generation in Canada, figures presented in his report may be regarded as being representative of the entire industry.

The statistics presented are for the years 1950, and 1954 - 1963 inclusive, he latter four years on a forecast basis. Capability and load figures are based on he situation as it existed at the time of each company's annual firm power peak pad. This load is calculated in terms of contractual commitments for firm power.

Generating capability is the maximum output that can be maintained at the time of annual firm power peak load. Net generating capability refers to the amount eft after power used in station service is deducted. It is calculated on the basis actual operating experience assuming all equipment in working order and available for use. Net generating capability should not be construed as representing installed apacity, a term used in reference to the name plate ratings of generating equipment is designated by the manufacturers.

The power situation in any province or for the country as a whole can be resented in several ways. Two of these are contained in the report and are based on the demand within the province (Table I) and the demand on the province (Table V). In each case the appropriate capability is also shown. Demand within the province is related to net capability which means net generating capability plus purchases less related to outside the province.

Statistics of the power situation within Canada and within the individual rovinces provide a measure of the growth of the industry within geographic areas and dicate the contribution of the industry to the economic growth of the country as whole. Demand on the province, however, is related to gross capability which is merating capability plus purchases outside the province and is of interest primately from a utility point of view.

Some care must be exercised in the interpretation of these data. For exple, the difference between gross capability and total firm demand is an indication of available reserves of power. Since power producers are not, however, all ily interconnected, reserves of power cannot always be completely utilized.

Review of Survey Results

Net generating capability: Net generating capability in Canada rose 8.5 per cent in 1959 to 20,205,000 kilowatts from the 1958 total of 18,628,000. The increase was just under the 9.0 per cent averaged over the nine-year period covered since the survey was inaugurated and compares with an increase of 13.0 per cent forecast for 1960. Greatly below-average increases of 2.1, 4.0 and 5.1 per cent are planned for 1961, 1962 and 1963 because of the substantial reserves which have been built up since 1956. In 1963, net generating capability at 25,487,000 kilowatts will have advanced some 26.1 per cent over the current level.

More than half of the increase planned for the next four years will be thermal compared with less than 20 per cent in the four-year period ended 1959. Thermal generating capability will account for 23.1 per cent of the total in 1963, against 15.4 per cent in 1959.

Since 1950, annual increments to thermal generating capability have averaged 17.1 per cent; additions between 1959 and 1963 are expected to average 17.7 per cent. Annual increases in hydro generating capability, which averaged 8.2 per cent between 1952 and 1959, are forecast as declining sharply to 3.5 per cent during the next four years.

Firm power peak load: Firm power peak load within Canada in 1959 amounted to 16,-201,000 kilowatts, an increase of 4.1 per cent over the revised 1958 total of 15,-568,000. The forecast for 1963 is 21,170,000 kilowatts, an estimated rise of 30.7 per cent. Annual rates of increase have averaged 7.4 per cent since 1950, slightly higher than the 6.9 per cent forecast for the next four years. The forecast rate of increase, however, is somewhat higher than the 6.6 per cent achieved in the last fou years.

During the eight-year period 1955-1963 a growth in firm power peak load of 162.5 per cent is indicated in Saskatchewan and 155.7 per cent in Alberta. The increase for all Canada during this period is expected to approximate 69 per cent.

Indicated Reserve: The indicated reserve for Canada rose sharply in 1959 to 3,-852,000 kilowatts from the revised total of 2,908,000 in 1958. By 1963 it will have risen to 4,211,000 kilowatts, but represent only 19.8 per cent of firm demand as compared with this year's 23.5 per cent. From a low of 8.5 per cent in 1956 the margin of reserve is expected to reach a peak of 29.2 per cent in 1960 before subsiding to the 1963 level of 19.8 per cent.

Reserves for individual provinces varied in 1959 from a high of 49.7 per cent in Saskatchewan to a low of 11.6 per cent in Ontario.

Firm Energy Requirement: Firm energy requirement rose 7.5 per cent in 1959 to 93,-656,000,000 kilowatt hours from 87,102,000,000 in 1958. Further annual increases averaging 7.4 per cent over the next four years are expected to result in a firm energy requirement of 124,743,000,000 kilowatt hours by 1963. The comparative stability of the rate of growth in firm energy requirement is evidenced by the fact that annual increments during the period 1950-1959 averaged 7.2 per cent.

Firm energy requirement within provinces showed much wider variations. During the eight-year period 1955-1963, firm energy requirement will increase 173.1 per cent in Saskatchewan, 160.5 per cent in Alberta and 131.4 per cent in Prince Edward Island. The comparable rate of growth for all Canada is 68.3 per cent.

During the recent survey a number of errors in reporting were uncovered hich resulted, in some instances, in figures being revised for earlier years. It im power peak load and firm energy requirement have been revised downwards for he province of Quebec in 1956 and 1957 and increased slightly in 1958. The changes n firm power peak load also affected indicated reserve. Small reductions in firm nergy requirement were made for each year back to 1950 in Nova Scotia figures.

- hart A Net Generating Capability Within Canada (Page 6): This chart graphically ortrays the rapid growth in ability to produce power and shows the extent to which hermal generation is becoming increasingly important.
- nart B Net Capability and Firm Demand Within Canada (Page 7): Chart B provides indication of the reserves available to meet firm demand for electric power lthin Canada.
- hart C Net Generating Capability Within Provinces (Pages 8 9): Chart C illustates the growth in capability and the comparative importance of hydro and thermal eneration within provinces.
- nart D Net Capability and Firm Demand Within Provinces (Pages 10 11): This part provides a graphic indication of the year to year ability of each of the rovinces to meet its firm demand for electric power.
- art E Firm Energy Requirement Within Canada (Page 12): Chart E shows the growth Canadian firm energy requirement during the period 1950 1962.
- ble I Summary (Pages 13 to 24): This table summarizes capability, firm power ak load, indicated reserve and firm energy requirement for Canada and for each of e provinces.
- ble II Net Generating Capability Within Provinces (Page 25): This table comres provincial rates of growth in net generating capability.
- ble III Firm Power Peak Load Within Provinces (Page 26): This table compares tes of growth of firm power peak load within provinces.
- tes of growth of firm energy requirement within Provinces (Page 27): This table compares
- cle V Indicated Reserve (Page 18): This table shows the relationship between edemand for power and the ability to meet it in each of the provinces and in mada as a whole. Demand on the province consists of firm power peak load within a province plus any indicated shortage or rejected load plus firm power deliveries side the province. Gross capability consists of net generating capability (hydro in the the province plus purchases of firm power under firm obligation comesources outside the province. The difference between gross capability and firm mand is the indicated reserve, and this, expressed as a percentage of total firm mand, can be used as a measurement of the industry's ability to satisfy demand and the contingencies. Since not all systems are fully interconnected it should be membered that reserves of power cannot always be completely utilized.

DEFINITIONS

FIRM ENERGY REQUIREMENT

Energy required to meet firm obligations, or for use in own industrial plant other than in electric boilers.

FIRM POWER

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

FIRM POWER PEAK LOAD

The annual FIRM POWER maximum average net kilowatt load of one hour duration within the UTILITY, SYSTEM or INDUSTRIAL ESTABLISHMENT.

FIRM OBLIGATIONS

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis.

INDICATED DEMAND

The sum of firm power peak load and indicated shortage.

INDICATED RESERVE

Net capability less indicated demand (+ or -).

INDUSTRIAL ESTABLISHMENT

A firm which generates power primarily for use in own plants.

NET GENERATING CAPABILITY

The maximum net kilowatt output (after station service) available from the generating facilities of the UTILITY, SYSTEM or INDUSTRIAL ESTABLISHMENT with all equipment available, at the time of the annual FIRM POWER PEAK LOAD, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

NET CAPABILITY

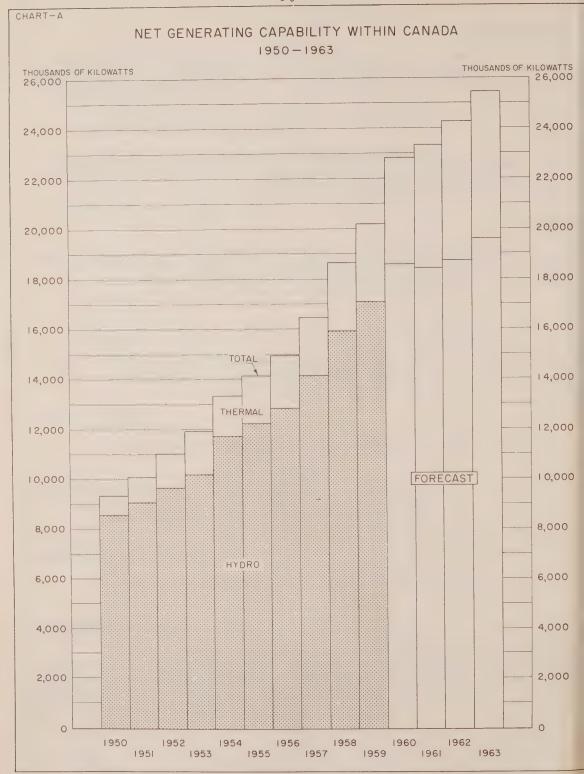
The sum of net generating capability and purchases of firm power under firm obligation from other utilities less deliveries of firm power under firm obligation to other utilities.

SYSTEM

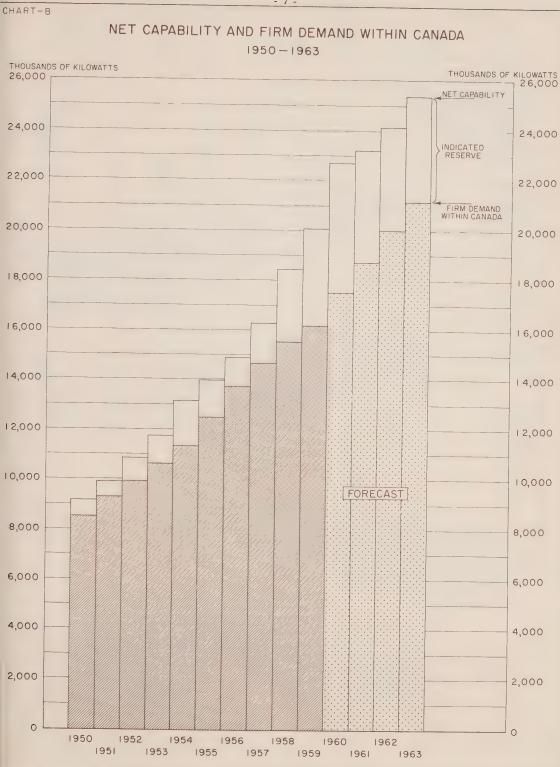
Two or more UTILITIES, having interconnections for the exchange of power, which although they may be separately incorporated, are controlled, managed or operated by one principal UTILITY.

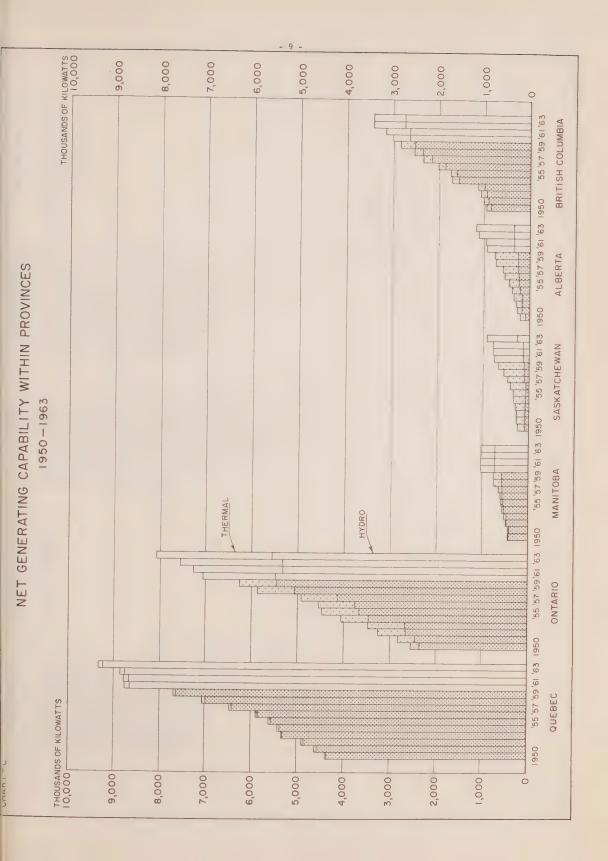
UTILITY

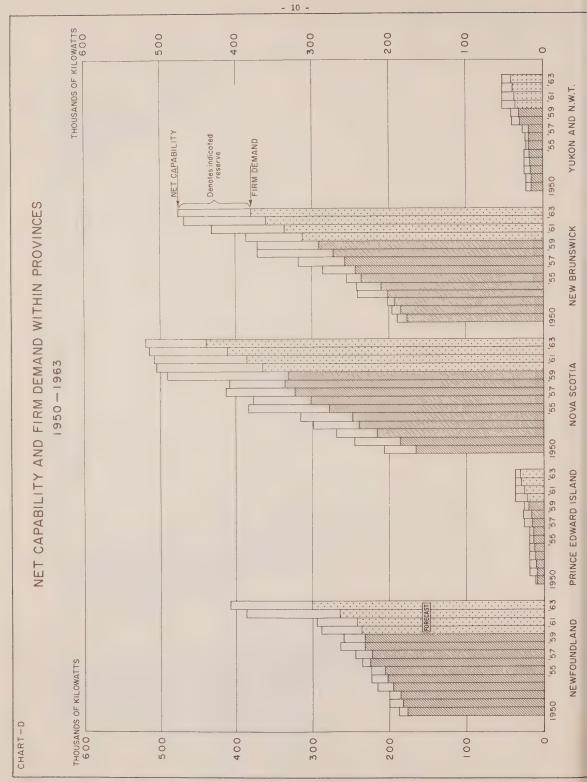
The Company, Commission, or UTILITY reporting or included in a SYSTEM report under Section IV (which generates at least part of its own power).

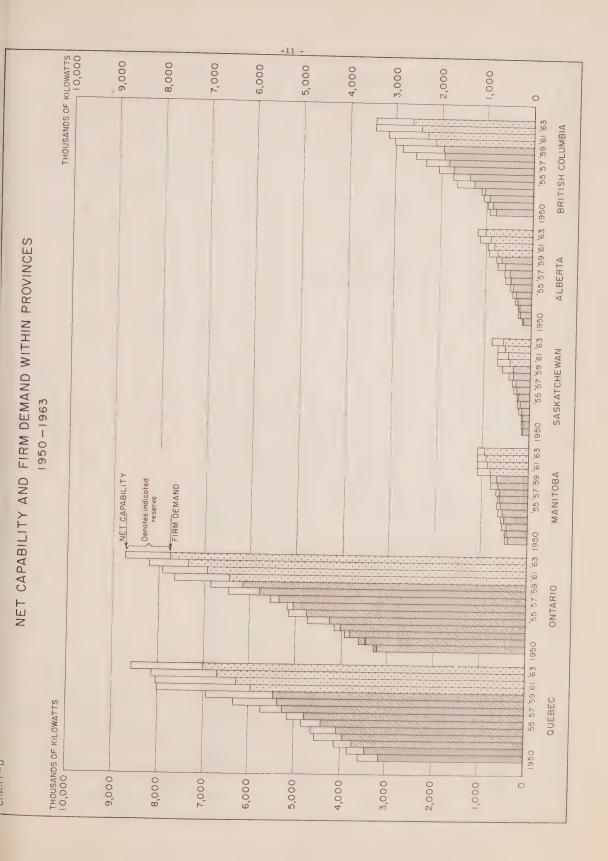


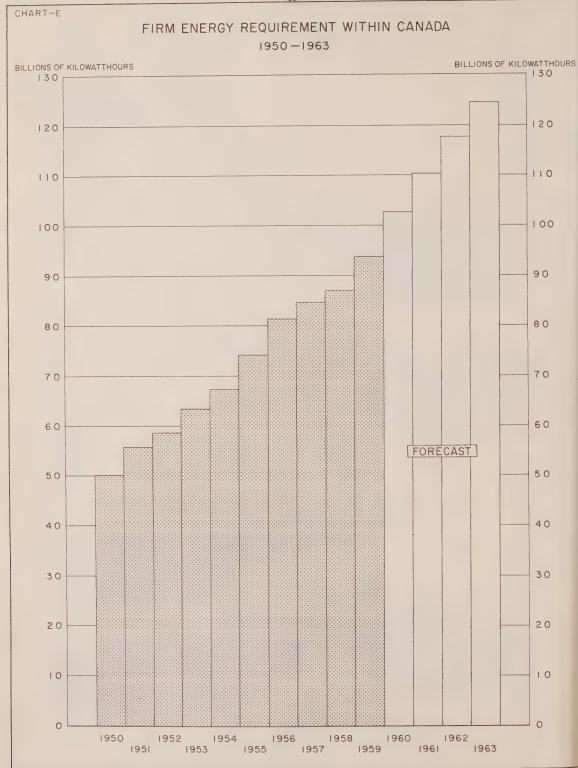
- 7 -











CANALL AND SLECTKIC FUNER SURVEY OF CAPABILITY AND LOAD

SUMMARY - CANADA

Thousands of kilowatts

1950 1954 1955 1956 1957 1958 1959													
### ### ### ### ### ### ### ### ### ##		1950	1057	L L	1					FOR	ECAST		1
### Prover from: 8,575		OCCT	1934	1955	1956	1957	1958	1959	1960	1961	1962	1963	ı
### ### ##############################	CAPABILITY:												1
8,575 11,719 12,211 12,841 14,143 15,912 17,086 1,086 1,609 1,936 2,142 2,326 2,716 3,119 1,1986 14,936 14,193 15,716 3,119 1,1986 14,193 18,476 20,053 1,198 1,198 1,198 14,199 1,198 14,199 1,198 14,199 1,198 14,199 1,198 14,199 1,198 14,199 1,198 14,199 1,198 14,199 1,198 14,199 1,198 14,199 1,198 14,199 1,198 14,199 1,198 14,199 1,198 14,199 1,198 14,199 1,198 14,199 1,198 14,199 1,198													
Power from: sampower to: 176 176 176 166 147 150 152 152 9,187 13,156 13,986 14,892 16,319 18,476 20,053 152 177 13,156 13,986 14,664 15,568 16,201 11 8,333 11,355 12,472 13,668 14,664 15,568 16,201 11 4 64 47 2	(a) Hydro (b) Thermal	8,575	11,719				15,912	17,086	18,573	18,413	18,737		
## 5 56							7,710	3,119	4,268	4,916	5,524	5,882	
m power to: 176	(a) Other provinces (b) United States	1 1	14		1 12	1 1	,	ı	1	ŧ	1	•	
## 176 176 166 147 150 152					}		1	1	1	1	1	1	
### A C T U A L 9,187 13,156 13,986 14,892 16,319 18,476 20,053 22,	(a) Other provinces (b) United States	176	176	166		150	152	152	1 0 1	100	t v	1	
## A C T U A L 8,313 11,355 12,472 13,668 14,664 15,568 16,201 217	Net capability (1 + 2	9,187	13,156	13,986	14,892	16,319	18,476	20,053	22,689	23,223	24,155	25,381	1
### 11,355 12,472 13,668 14,664 15,568 16,201 217	PTRM POURD DEAF 1045					CTUA				FOR	ECAST		II.
## 1,355 12,472 13,668 14,664 15,568 16,201 217	TOTAL STATES STATES TOTAL												,
rement within Canada (5 + 6) 8,530 11,359 12,536 13,715 14,666 15,568 16,201 + 657 +1,797 +1,450 +1,177 +1,653 +2,908 +3,852 M I L L I O N S O F K I L O W A T T T 40,627 87,102 93,656 10,005 67,317 73 748 79,913 84,222 87,102 93,656 10,005 67,328 74,126 81,459 84,776 87,102 93,656 10,005 10,418 1,357 1,332 1,226 1,172 1,264 1,253 1,418 1,357 1,337 1,326 1,126 1,172 1,264 1,253		8,313	11,355	12,472	13,668	14,664	15,568	16,201	17,529	18,710	19,999	21 170	
#thhin Canada (5 + 6) 8,530 11,359 12,536 13,715 14,666 15,568 16,201 17 + 657 +1,797 +1,450 +1,177 +1,653 +2,908 +3,852 +5 M I L L I O N S O F K I L O W A T T		217	4	99	47	2	1	t		,	1	21,4/0	
+ 657 +1,797 +1,450 +1,177 +1,653 +2,908 +3,852 +5 rement within Canada 49,627 67,317 73 748 79,913 84,222 87,102 93,656 102, R I L I O N S O F K I L O W A T I - R I L L I O N S O F K I L O W A T I - 10,418 1,357 1,332 1,226 1,172 1,264 1,253 1, 1,418 1,357 1,332 1,226 1,172 1,264 1,253 1, 1,418 1,357 1,332 1,226 1,172 1,264 1,253 1,		8,530	11,359		13,715	14,666			17.529	18.710	19 909	071 10	1
+ 657 +1,797 +1,450 +1,177 +1,653 +2,908 +3,852 MILLIONS OF KILOWAT MILLIONS OF KIL	NDICATED RESERVE:										20100	21,1/0	(1
rement within Canada 49,627 67,317 73 748 79,913 84,222 87,102 93,656 378 11 378 1,546 554	8. Difference (4 - 7)	l l	+1,797	+1,450	+1,177	+1,653	+2,908	+3,852	+5,160	+4,513	+4,156	+4,211	
Firm energy requirement within Canada 49,627 67,317 73 748 79,913 84,222 87,102 93,656 Indicated shortage Indicated firm energy requirement 50,005 67,328 74,126 81,459 84,776 87,102 93,656 Deliveries of firm energy to: (a) Other provinces (b) United States (c) Total (a + b) 1,357 1,357 1,332 1,226 1,172 1,264 1,253 1,418 1,357 1,357 1,357 1,357 1,357 1,355 1,256 1,725 1,254 1,253	IRM ENERGY REQUIREMENT:				H	LION	0 F	ILOW	T - H 0	URS			II.
Indicated shortage Indicated firm energy requirement within Canada (9 + 10) Deliveries of firm energy to: (a) Other provinces (b) United States (c) Total (a + b) Indicated firm energy requirement 50,005 67,328 74,126 81,459 84,776 87,102 93,656 1,418 1,357 1,332 1,226 1,172 1,264 1,253 1,418 1,357 1,357 1,332 1,226 1,172 1,264 1,253		49,627	67,317	73 748	79,913	84.222	87, 102	03 656	102 207	0			1
Indicated firm energy requirement 50,005 67,328 74,126 81,459 84,776 87,102 93,656 10 Beliveries of firm energy to: (a) Other provinces (b) United States (c) Total (a + b) 1,264 1,253 1,216 1,172 1,264 1,253		378	11	378	1,546	554	,		102,134	110,267	117,869	124,743	
Deliveries of firm energy to: (a) Other provinces (b) United States (c) Total (a + b) (c) Total (a + b) (d) Total (a + b) (e) Total (a + b) (f) Total (a + b) (g) Total (a + b) (g) Total (a + b) (g) Total (a + b)		50,005	67,328	74,126	81.459	922 78	87 103	227 60			1	r	1
(a) Other provinces (b) United States (c) Total (a + b) (d) Total (a + b) (e) Total (a + b) (f) Total (a + b) (g) Total (a + b)						21,110	07, 102	93,050	102,794	110,287	117,869	124,743	
(c) Total (a + b) 1,26 1,172 1,26 1,172 1,253	(a) Other provinces (b) United States	1,418	1,357	1,332	1,226	1,172	1,264	1,253	1,251	946	7778	1 7/8	u
		1,418	1,357	1,332	1,226	1,172	1,264	1,253	1.251	9//6	07.70	6	
Firm energy requirement on Canada (11 + 12) 51,423 68,685 75,458 82,685 85,968 00.266 07,000	13. Firm energy requirement on Canada (11 + 12)	51,423	68,685	75,458	82.685	870 58	776 00	000 /0	10764	046	544	843	

TABLE I

SUMMARY - NEWFOUNDLAND (including Labrador)

Thousands of kilowatts

						0101	0		FOREC	CAST		
	1950	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	
CAPABILITY:												
1. Net generating capability:												
(a) Hydro (b) Thermal	176	207	207	215	220	243	243	252 45	259	352	373 44	
2. Receipts of firm power from:												
(a) Other provinces (b) United States	1 1			1 1	1 1	1 1	1 1	1 1		1 1	f t	
3. Deliveries of firm power to:												
(a) Other provinces (b) United States	4 4	1 1		9 1	9 1	α ο ι	7 -	ω '	6 -	6 1	6	
4. Net capability (1 + 2 - 3)	188	223	223	236	243	263	260	289	294	387	408	
				ACTUA	ı				FORE	CAST		- 1
FIRM POWER PEAK LOAD:												4 -
5. Within province	177	201	206	222	222	231	231	237	241	264	300	
6. Indicated shortage	1	-4	pH .	2	1	1	1	-	,	٠	,	
7. Indicated demand within province (5 + 6)	177	202	207	224	222	231	231	237	241	264	300	,.
INDICATED RESERVE:										00.5		
8. Difference (4 - 7)	+ 11	+ 21	+ 16	+ 12	+ 21	+ 32	+ 29	+ 52	+ 53	+ 123	+ 108	
				MILL	I O N S	OFKI	LOWATT	- H O U R	S			
FIRM ENERGY REQUIREMENT:												
9. Firm energy requirement within province	1,058	1,225	1,289	1,374	1,333	1,320	1,369	1,424	1,496	1,683	1,885	
10. Indicated shortage	4	6	10	1	•	,		•	5			1
11. Indicated firm energy requirement within province $(9+10)$	1,058	1,234	1,299	1,374	1,333	1,320	1,369	1,424	1,496	1,683	1,885	
12. Deliveries of firm energy to:												
(a) Other provinces (b) United States		1 1	1 1	31	94	777	33	34	35	36	37	
(c) Total (a + b)	4	ŧ		31	97	44	33	34	35	36	37	и
13. Firm energy requirement on the province $(11+12)$	1,058	1,234	1,299	1,405	1,379	1,364	1,402	1,458	1,531	1,719	1,922	

30

30

+ 7

118

118

108

96

85

81

69

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51

94

31

13. Firm energy requirement on the province (11 + 12)

(a) Other provinces(b) United States (c) Total (a + b)

118

37

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37

SIXTH ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

TABLE I

1963

		ΩI	SUMMARY - P	PRINCE EDWARD ISLAND	ISLAND					
			Thousand	Thousands of kilowatts	ts					
	1950	1954	1955	1956	1957	1958	1959		FOREC	AST
CABARII ITTO								1960	1961	1962
CALABITI										
1. Net generating capability:										
(a) Hydro (b) Thermal	10	1.8	18	1 00	. 25	26	25	37	37	37
2. Receipts of firm power from:										
(a) Other provinces (b) United States	1 1	1 1			6 1	f 1	t g		1 1	
3. Deliveries of firm power to:										
(a) Other provinces (b) United States	1 1	1 1	f 1		1 1		1 1	1 1	8 6	1 1
4. Net capability (1 + 2 - 3)	10	18	18	18	25	26	25	37	37	37
				ACTU	A L				FOREC	AST
FIRM POWER PEAK LOAD:										
5. Within province	00	11	12	12	14	16	19	21	24	28
6. Indicated shortage	-	t	-	4	,	ı	1	,		ı
7. Indicated demand within province (5 + 6)	80	11	12	12	14	16	19	21	24	28
INDICATED RESERVE:										
8. Difference (4 - 7)	+ 2	+ 7	9 +	9 +	+ 11	+ 10	9 +	+ 16	+ 13	6 +
				MILL	IONS	OF KILO	WATT-	HOURS		
FIRM ENERGY REQUIREMENT:										
9. Firm energy requirement within province	31	97	51	53	09	69	81	85	96	108
10. Indicated shortage	-	1	1	1	į	ŧ		1	,	f
11. Indicated firm energy requirement within province $(9+10)$	31	949	51	53	09	69	81	85	96	108
12. Deliveries of firm energy to:										

TABLE I

SUMMARY - NOVA SCOTIA

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113 96
,
1
2 1
207
163
4
167
+ 40
874 1,253
1
874 1,253
9 1
9
880 1,260

SUMMARY - NEW BRUNSWICK

Thousands of kilowatts

	1950	1954	1955	1956	1957	1958	1959		FOREC	AST	
CAPABILITY:								1960	1961	1962	1963
1. Net generating capability:											
(a) Hydro (b) Thermal	90	112	112	112	148	185	1885	185	185	221 249	221
2. Receipts of firm power from:											
(a) Other provinces (b) United States	2 1	2 1	4 :	IO I	NO I	00 ÷		00 (יח ו	9 1	9 1
3. Deliveries of firm power to:											
(a) Other provinces (b) United States	, 10	٠ ٧	ιτΩ	1 10	1 00	1 0	1 00	100	1 00) 00	1 00
4. Net capability (1 + 2 - 3)	189	241	255	286	318	371	371	385	431	468	475
				ACTUA	I				FOREC	AST	
FIRM POWER PEAK LOAD:	ļ										
0. Within province	171	210	235	243	258	273	291	312	337	360	380
o. Indicated snortage			1	-		(1	1			1
7. Indicated demand within province (5 + 6)	177	210	236	243	258	273	291	312	337	360	380
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 12	+ 31	+ 19	+ 43	09 +	+ 98	+ 80	+ 73	+ 94	+108	+ 95
FIRM ENERGY REQUIREMENT:				MIL	LIONS	OF KIL	OWATT	- HOURS			
9. Firm energy requirement within province	970	1,199	1,248	1,275	1,347	1,402	1,523	1,753	1,902	2,008	2,115
10. Indicated shortage		4	,	1	•	,	1	1	1	1	1
11. Indicated firm energy requirement within province (9 + 10)	970	1,199	1,248	1,275	1,347	1,402	1,523	1,753	1,902	2,008	2,115
12. Deliveries of firm energy to:											
(a) Other provinces (b) United States	41	59	33	32	29	63	51	- 49	- 47	- 45	- 43
(c) Total (a + b)	41	65	33	32	29	63	51	64	47	45	43
13. Firm energy requirement on the province (11 + 12)	1,011	1,258	1,281	1,307	1,376	1,465	1,574	1,802	1,949	2,053	2,158
The state of the s						The second secon					

- 17 -

TABLE I

SUMMARY - QUEBEC

Thousands of kilowatts

	1950	1954	1955	1056	1057	0101	1050		FORI	ECAST		1
	200	+001	CCCT	DCAT	1661	1930	1939	1960	1961	1967	1063	1
								2007	1707	7067	1303	.[
CAPABILITY:												
1. Net generating capability:												
(a) Hydro (b) Thermal	4,370	5,378	5,583	5,854	6,406	6,992	7,612	8,656	8,677	8,767	9,217	
2. Receipts of firm power from:												
(a) Other provinces (b) United States		1 4	1 2	7	7	0/1	0, 1	10	11	11	11	
3. Deliveries of firm power to:												
(a) Other provinces* (b) United States	732 56	719 56	729	691	694	673	696	699	700	702	703	
4. Net capability (1 + 2 - 3)	3,609	4,643	4,840	5,154	5,718	6,332	6,937	8,015	8,036	8,131	8,580	
				ACTU	AL				FORE	ECAST		
FIRM POWER PEAK LOAD:												
5. Within province	3,174	4,092	4,367	4,749	5,256	5,375	5,466	5,959	6,284	6,691	7,000	
6. Indicated shortage	ŧ	1	777	44	2	,	,	1	,	,		
7. Indicated demand within province (5 + 6) INDICATED RESERVE:	3,174	4,092	4,411	4,793	5,258	5,375	5,466	5,959	6,284	6,691	7,000	
8. Difference (4 - 7)	+ 435	+ 551	+ 429	+ 361	097 +	+ 957	+1,471	+2,056	+1,752	+1,440	+1,580	
				MIL	LIONS	OF KIL	OWATT	-HOURS				
FIRM EMERGY REQUIREMENT: 9. Firm energy requirement within province	20,442	27,954	29,479	30,331	30,572	31,763	33,303	38,260	40,606	43.659	45.841	
10. Indicated shortage	123		362	1,546	240	1	1	1	•		,	
11. Indicated firm energy requirement within province $(9+10)$	20,565	27,955	29,841	31,877	31,1 3	31,763	33,303	38,260	40,606	43,659	45,841	
12. Deliveries of firm energy to:												
(a) Other provinces* (b) United States	4,425	4,331	4,260	4,117	4,075	4,205	4,211	4,217	4,229	4,241	4,253	
(c) Total (a + b)	4,915	4,821	4,750	4,608	4,560	4,695	4,703	4,707	4,719	4,731	4,744	
 Firm energy requirement on the province (11 + 12) 	25,480	32,776	34,591	36,485	35,672	36,458	38,006	42,967	45,325	48,390	50,585	11

^{*} Includes deliveries supplied from Cedars on a short term basis.

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SUNMARY - ONTARIO

Thousands of kilowatts

	7370	1954	1955	1956	1957	1958	1959		FOR	ECAST	
							6004	1960	1961	15	1963
CAPABILITY:											
1. Net generating capability:											
(a) Hydro (b) Thermal	2,367	3,481	3,688	3,778	4,145	5,081	5,467	5,495	5,304	5,312	5,569
2. Receipts of firm power from:							8	1,5 5	1,938	2,241	2,523
(a) Other provinces*(b) United States	741	732	741	702	705	899	692	769	695	969	269
3. Deliveries of firm power to:								1	i .	1	1
(a) Other provinces (b) United States	85	1 88	1 85	1 86	1 86	86	86	2 86	2 41	41	2 41
4. Net capability $(1+2-3)$	3,221	4,734	5,143	5,180	5,550	6,462	6,879	7,666	7,914	8,206	8,746
ALL ALL METHOD WITH				ACTUA	1				FOR	ECAST	
FIRM FUMER FEAK LUAD: 5. Within nrowing	0										
	3,0,8	4,261	4,757	5,064	5,369	5,794	6,154	6,470	6,920	7,375	7,775
	213	•	18	1	•	,	,	1		•	1
7. Indicated demand within province (5 + 6)	3,291	4,261	4,775	5,064	5,369	5,794	6,154	6,470	6,920	7,375	7,775
INDICATED RESERVE:											
8. Difference (4 - 7)	- 70	+ 473	+ 368	+ 116	+ 181	+ 668	+ 725	+1,196	766 +	+ 831	+ 971
				MILL	IONSO	F KILO	WATT-H	OURS			
FIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within province	18,016	23,928	26,376	28,875	30,768	31,401	34.844	36,612	38,996	41 411	73 600
10. Indicated shortage	255	1	9		1		1			111641	7,000
11. Indicated form energy requirement within province $(9+10)$	18,271	23,929	26,382	28,875	30,768	31.401	34.844	36 612	300 00	1 1 1 1 1 1	1 000
12. Deliveries of firm energy to:								770,00	20,730	41,411	43,690
(a) Other provinces (b) United States	703	3 624	93	703	4 658	5 711	710	712	5 077	300	500
(c) Total (a + b)	705	627	069	707	677	711					606
13. Firm energy requirement on the					700	/ TD	/15	717	414	314	314
province (11 + 12)	18,976	24,556	27,072	29,582	31,430	32,117	35,559	37,329	39,410	41,725	44,004

TABLE I

SUMMARY - MANITOBA

			Thousands	Thousands of kilowatts	ω					
	1950	1954	1955	1956	1957	1958	1959		FOREC	AST
								1960	1961	1962
CAPABILITY:										
1. Net generating capability:										
(a) Hydro (b) Thermal	418	522 46	547 46	556	561	566	566	723 294	723 294	723
2. Receipts of firm power from:										
(a) Other provinces (b) United States	68	80	79	- 64	69	89 1	72	73	92	76
3. Deliveries of firm power to:										
(a) Other provinces (b) United States	6 :	13	14	1.4	14	1 (1 1	f l	1 1	1 1
4. Net capability (1 + 2 - 3)	487	635	658	652	694	802	806	1,090	1,093	1,093
				ACTU	AL				FOREC	AST
FIRM POWER PEAK LOAD:										
5. Within province	419	533	594	605	809	979	069	814	884	924
6. Indicated shortage	1	1			1	,	1	,		
7. Indicated demand within province (5 + 6)	419	533	594	605	809	949	069	814	884	924
INDICATED RESERVE:										
8. Difference (4 - 7)	+ 68	+ 102	+ 64	+ 47	+ 86	+ 156	+ 116	+ 276	+ 209	+ 169
				MIL	LIONS	OF KIL	OWATT-	HOURS		
FIRM ENERGY REQUIREMENT: 9. Firm energy requirement within province	2,218	2,886	3,122	3,414	3,435	3,557	3,828	4,224	5,067	5,268
10. Indicated shortage	1	•	,	ı	'	t	1	1	1	
 Indicated firm energy requirement within province (9 + 10) 	2,218	2,886	3,122	. 3,414	3,435	3,557	3,828	4,224	5,067	5,268
12. Deliveries of firm energy to:										
(a) Other provinces (b) United States	79	114	114	96	136	, ,	1 1	1 1		• •
(c) Total (a + b)	79	114	114	96	136	8	1	•	1	ţ
13. Firm energy requirement on the province (11 + 12)	2,297	3,000	3,236	3,508	3,571	3,557	3,828	4,224	5,067	5,268

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5,569

5,569

TABLE I

SUMMARY - SASKATCHEWAN

Thousands of kilowatts

			Thousands	s of kilowatts	ωJ						
	1950	1954	1955	1956	1957	1958	1959		FOR	ECAST	
								1960	1961	1962	1963
CAPABILITY:											
1. Net generating capability:											
(a) Hydro (b) Thermal	85	85 243	82 257	82 320	87	87	88	108	111	111	245
2. Receipts of firm power from:									000	600	600
(a) Other provinces (b) United States	1.1		9.1		f i	≓ :	7	H	•	1	1
3. Deliveries of firm power to:									ı	1	
(a) Other provinces(b) United States	89	80	79	79	69	89 1	72	73	76	76	76
4. Net capability (1 + 2 - 3)	146	248	260	338	394	471	009	705	704	704	838
				ACTUA	L			FORE	CAST		
FIRM POWER PEAK LOAD:											
5. Within province	128	196	227	278	299	353	377	430	649	538	- 21 965
6. Indicated shortage	ı	1	4	ı	1	1	,	1	ı	1	
7. Indicated demand within province $(5+6)$	128	196	227	278	299	353	377	430	624	238	205
INDICATED RESERVE:											020
8. Difference (4 - 7)	+ 18	+ 52	+ 33	09 +	+ 95	+ 118	+ 223	+ 275	+ 225	+ 166	+ 242
FIRM ENERGY REGHTREMENT.				MILLI	ONS OF	KILO	WATT-H	OURS			
9. Firm energy requirement within province	405	742	877	1,047	1,276	1.422	1 527	200	1 017		
10. Indicated shortage	٠	,					,	1	77.77	7,142	2,393
11. Indicated firm energy requirement within province $(9+10)$	405	742	877	1.047	1.276	1 422	1 527	004 1			
12. Deliveries of firm energy to:						7777	1,751	1,709	1,91/	2,142	2,395
(a) Other provinces(b) United States	200	558	571	554	503	504	517	520	530	530	530
	200	558	571	554	503	504	517	520	530	530	530
13. Firm energy requirement on the province (11 + 12)	908	1 300	1 44.0	1 603	1						
	5	00067	0++°+	1,601	1,7/9	1,926	2.044	2,229	2,447	2,672	2,925

TABLE I

SUMMARY - ALBERTA

FORECAST	1960 1961 1962 1963			238 318 318 319 319 530 604 645 795 869				1	770 924 965 1,115 1,188	FORECAST		649 729 809 899 1,000	222 -	649 729 809 899 1,000		121 + 195 + 156 + 216 + 188	ATT-HOURS		3,156 3,534 3,936 4,375 4,843		3,156 3,534 3,936 4,375 4,843		1 1	
6761				238 23 496 53		4:		et 1	77 757			580 64	1	580 64		+ 157 + 121	F KILOWA		2,760 3,15	1	2,760 3,15		ıt	
1057	1321			238		4:		J 1	592	ΑL		9/4	,	476		+ 116	LIONS O		2,424		2,424		1 1	. , .
1056	1930			338		4 1		1 1	562	ACTU		451	'	451		+ 111	MIL		2,180		2,180		t t	1 1 1
1055	7933			220		1 1		en i	455			391	•	391		+ 64			1,859		1,859			
1057	1934			202		4 -		1 1	400			313	٠	313		+ 87			1,581	1	1,581		1 1	1 1
1050	1950			83 108		i i		en i	188	The state of the s		176	1	176		+ 12			1,023		1,023		14	14
		CAPABILITY:	1. Net generating capability:	(a) Hydro (b) Thermal	2. Receipts of firm power from:	(a) Other provinces (b) United States	3. Deliveries of firm power to:	(a) Other provinces (b) United States	4. Net capability (1 + 2 - 3)		FIRM POWER PEAK LOAD:	5. Within province	6. Indicated shortage	7. Indicated demand within province (5 + 6)	INDICATED RESERVE:	8. Difference (4 - 7)		FIRM ENERGY REQUIREMENT:	9. Firm energy requirement within province	10. Indicated shortage	 Indicated firm energy requirement within province (9 + 10) 	12. Deliveries of firm energy to:		

SUMMARY - BRITISH COLUMBIA

Thousands of kilowatts

	1950	1954	1955	1956	1957	1958	1959		FOR	ECAST	
CAPABILITY:								1960	1961	1962	1963
1. Net generating capability:											
(a) Hydro (b) Thermal	852	1,578	1,614	1,866	2,187	2,356	2,524	2,651	2,651	2,741	2,741
2. Receipts of firm power from:						å 4 1	רכי	3/2	955	707	702
(a) Other provinces (b) United States	m ı		en i	52		ř	,	1	•		1
3. Deliveries of firm power to:				1		1	ı	1		1	•
	30	30	20	4 1	7 1	7 -	നി	m 1	7 1	p 1	* 1
4. Net capability (1 + 2 - 3)	921	1,674	1,730	2,067	2,346	2,564	2,874	3,020	3,188	3,447	3,443
FIRM POWER PEAK LOAD:				ACTU	A L			FORE	CAST		
5. Within province 6. Indicated shortage	799	1,275	1,386	1,724	1,821	1,935	1,963	2,158	2,309	2,470	2,640
7. Indicated demand within province (5 + 6) INDICATED RESERVE:	799	1,275	1,386	1,725	1,821	1,935	1,963	2,158	2,309	2,470	2,640
8. Difference (4 - 7)	+ 122	+ 399	+ 344	+ 342	+ 525	+ 629	+ 911	+ 862	+ 879	+ 977	+ 803
FIRM ENERGY REQUIREMENT:				MILLI	ONS OF	KILO	WATT-HO	URS			
9. Firm energy requirement within province 10. Indicated shortage	4,523	6,414	8,011	9,802	11,445	11,726	12,234	13,290	14,263	15,092	16,041
 indicated firm energy requirement within province (9 + 10) Deliveries of firm energy to: 	4,523	6,414	8,011	9,802	11,459	11,726	12,234	13,290	14,263	15,092	16,041
(a) Other provinces (b) United States	184	10	10	10	6.	9:	91	ν. ι	5	7	m .
(c) Total (a + b)	184	194	132	10	6	9	9	5	5	7	, m
13. Firm energy requirement on the province (11 + 12)	4,707	6,608	8,143	9,812	11,468	11,732	12,240	13,295	14,268	15,096	16,044

	SUS	SUMMARY	YUKON AND	- YUKON AND NORTHWEST TERRITORIES	TERRITOR	TES					
		I	housands	Thousands of kilowatts	t s						
	1950	1954	1955	1956	1957	1958	1050		FOREC	CAST	
					1004			1960	1961	1962	1963
<u>CAPABILITY</u> :											
1, Net generating capability:											
(a) Hydro (b) Thermal	21	24	22	22 1	25	37	37	6 6	44,	44	477
2. Receipts of firm power from:								•=			
(a) Other provinces (b) United States	1 1	1 1	t i		1 1	()	1 1	1 1	()	ı t	1 1
3. Deliveries of firm power to:											
(a) Other provinces (b) United States	1 1	1 1	1 1	1 1	1 +	1 1				1 4	1 1
4. Net capability $(1 + 2 - 3)$	21	24	22	23	26	07	41	53	53	53	53
				ACTUA	7				FORE	CAST	
FIRM POWER PEAK LOAD:											
5. Within province	14	18	19	19	19	30	31	35	37	39	41
6. Indicated shortage		٠		1	1	1	,	,	9	1	1
7. Indicated demand within province $(5+6)$	14	18	19	19	19	30	31	35	37	39	41
INDICATED RESERVE: 8. Difference (4 - 7)	+ 7	9	۳ +	4	+ 7	+ 10	+ 10	+ 18	+ 16	+ 14	+ 12
				MILL	IONS	OF KI	LOWAT	T-HOURS	S		
FIRM ENERGY REQUIREMENT:	7	0	70	a	115	121	157	181	186	701	200
	5 1	· '	ς '	ξ '	,	1	,		} '	1) I
11. Indicated firm energy requirement	67	C	90	o o	115	131	157	181	186	194	200
12. Deliveries of firm energy to:			2								
(a) Other provinces (b) United States	8 6	1 1			1 1		1 1	1 1	1-1	1-1	1 1
(c) Total (a + b)	1 1	1	0	1	4	1	1	•	8	t	9
 Firm energy requirement on the province (11 + 12) 	29	68	96	86	115	131	157	181	186	194	200

TABLE II

NET GENERATING CAPABILITY WITHIN PROVINCES*

Thousands of kilowatts

	1.					- 25							
CHANGE	1955-	87.0	105.5	35.4	86.3	0.99	80.3	70.9	169.6	159.4	97.1	140.9	80.1
PERCENTAGE CHANGE	1959-	56.2	0.84	N,	27.9	21.4	28.9	38.5	36.2	54.7	19.7	29.3	26.1
P P	1955-	19.7	38.9	28.4	45.7	36.7	39.8	23.8	68.4	67.7	64.7	86.4	42.8
	1963	417	37	520	477	9,329	8,092	1,017	914	1,188	3,443	53	25,487
CAST	1962	396	37	514	470	8,879	7,553	1,017	780	1,114	3,448	53	24,261
FORE	1961	303	37	508	434	8,782	7,262	1,017	780	963	3,190	53	23,329
	1960	297	37	208	386	8,761	7,060	1,017	777	922	3,023	53	22,841
	1959	267	25	493	373	7,681	6,275	734	671	768	2,877	41	20,205
	1958	271	26	411	372	7,053	5,881	734	538	734	2,568	047	18,628
	1957	249	25	415	321	6,461	4,932	639	463	588	2,350	26	16,469
	1956	242	18	378	286	5,890	4,565	602	402	558	2,019	23	14,983
	1955	223	18	384	256	5,619	4,488	593	339	458	1,747	22	14,147
	1954	223	18	318	244	5,413	4,088	268	328	396	1,708	24	13,328
	1950	188	10	209	192	4,396	2,566	428	214	191	876	21	9,363
	PROVINCE	Newfoundland (including Labrador)	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	CANADA

^{*} Hydro plus thermal (Table I, item l a + .).

TABLE III

FIRM POWER PEAK LOAD WITHIN PROVINCES*

Thousands of kilowatts

									FOREC	AST		PERCI	PERCENTAGE CHANGE	38
PROVINCE	1950	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1955-	1959-	1955-
Newfoundland (including Labrador)	177	202	207	224	222	231	231	237	241	264	300	11.6	29.9	6.44
Prince Edward Island	œ	11	12	12	14	16	1.9	21	24	28	30	ال ق ق	57.9	150.0
Nova Scotia	167	248	278	301	322	335	330	364	386	411	439	18.7	33.0	57.9
New Brunswick	177	210	236	243	258	273	291	312	337	360	380	23.3	30.6	61.0
Quebec	3,174	4,092	4,411	4,793	5,258	5,375	5,466	5,959	6,284	6,691	7,000	23.9	28.1	- 26 -
Ontario	3,291	4,261	4,775	5,064	5,369	5,794	6,154	6,470	6,920	7,375	7,775	28.9	26.3	62.8
Manitoba	419	533	594	909	809	979	069	814	884	924	696	16.2	40.4	63.1
Saskatchewan	128	196	227	278	299	353	377	430	627	538	965	66.1	58.1	162.5
Alberta	176	313	391	451	476	580	649	729	608	899	1,000	0.99	54.1	155.7
British Columbia	799	1,275	1,386	1,725	1,821	1,935	1,963	2,158	2,309	2,470	2,640	41.6	34.5	90.5
Yukon and N.W.T.	14	18	19	19	19	30	31	35	37	39	41	63.1	32.2	115.8
CANADA	8,530	11,359	12,536	13,715	14,666	15,568	16,201	17,529	18,710	19,999	21,170	29.2	30.7	68.9

^{*} Indicated Firm Demand (Table I, item 7).

TABLE IV

FIRM ENERGY REQUIREMENT WITHIN PROVINCES*

Millions of Kilowatt Hours

									FORE	CAST		PERCI	PERCENTAGE CHANGE	ler ler
PROVINCE	1950	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1955-	1959-	1955-
Newfoundland (including Labrador)	1,058	1,234	1,299	1,374	1,333	1,320	1,369	1,424	1,496	1,683	1,885	5.4	37.7	45.1
Prince Edward Island	31	94	51	53	99	69	81	85	96	108	118	50.00	45.7	131.4
Nova Scotia	874	1,253	1,340	1,464	1,447	1,551	1,634	1,722	1,822	1,929	2,046	21.9	25.2	52.7
New Brunswick	970	1,199	1,248	1,275	1,347	1,402	1,523	1,753	1,902	2,008	2,115	22.0	38.9	69.5
Quebec	20,565	27,955	29,841	31,877	31,112	31,763	33,303	38,260	40,606	43,659	45,841	11.6	37.6	- 27 9:85
Ontario	18,271	23,929	26,382	28,875	30,768	31,401	34,844	36,612	38,996	41,411	43,690	32.1	25.4	65.6
Manitoba	2,218	2,886	3,122	3,414	3,435	3,557	3,828	4,224	5,067	5,268	5,569	22.6	45.5	78.4
Saskatchewan	405	742	877	1,047	1,276	1,422	1,527	1,709	1,917	2,142	2,395	74.1	56.8	173.1
Alberta	1,023	1,581	1,859	2,180	2,424	2,760	3,156	3,534	3,936	4,375	4,843	8.69	53.4	160.5
British Columbia	4,523	6,414	8,011	9,802	11,459	11,726	12,234	13,290	14,263	15,092	16,041	52.7	31.1	100.2
Yukon and N.W.T.	67	88	96	98	115	131	157	181	186	194	200	63.5	27.4	108.3
CANADA	50,005	67,328	74,126	81,459	84,776	87,102	93,656	102,794	110,287	117,869	124,743	26.3	33.2	68.3
* Table I item 11														

^{*} Table I, item 11.

INDICATED RESERVE*

Thousands of Kilowatts

									FOREC	A S T		PERCENT	PERCENTAGE CHANGE	
PROVINCE	1950	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1955-	1959-	1955-
Newfoundland (including Labrador)														
1. Gross capability 2. Total firm demand on the province	188	22 3 202	22 3 207	242 230	249 228	271 239	267	297 245	303	396 273	417 309	19.7	56.2	87.0
3, Indicated reserve (1 - 2)	11	21	16	12	21	32	29	52	53	123	108	XXX	XXX	xxx
4. Indicated reserve expressed as a % of total firm demand	6.2	10.4	7.7	5.2	9.2	13.4	12.2	21.2	21.2	45.0	34.9	XXX	xxx	XXX
Prince Edward Island														
1. Gross capability 2. Total firm demand on the province	10	118	18	18	25 14	26 16	19	37 21	37 24	37	37	38.9	48.0	105.5
3. Indicated reserve (1 - 2)	2	7	9	9	11	10	9	16	13	6	7	XXX	xxx	xxx
4. Indicated reserve expressed as a % of total firm demand	25.0	63.6	50.0	50.0	78.6	62.5	31.6	76.2	54.2	32.1	23.3	XXX	XXX	XXX
Nova Scotia														
1. Gross capability 2. Total firm demand on the province	209	318	384	378	415	411	333	508	386	514 411	520	28.4	31.8	35.4
3. Indicated reserve (1 - 2)	700	89	104	75	16	73	160	141	122	103	81	XXX	XXX	XXX
4. Indicated reserve expressed as a % of total firm demand	23.7	27.2	37.1	24.8	28.1	21.6	48.0	38.4	31.6	25.1	18.4	xxx	XXX	XXX
New Brunswick														
 Gross capability Total firm demand on the province 	194	246 215	260 241	291 248	326 266	380	300	394	439	476	483	46.1	27.1 29.3	85.8
	12	31	19	43	09	86	80	73	94	108	95	xxx	XXX	XXX
 Indicated reserve expressed as a % of total firm demand 	9.9	14.4	7.9	17.3	22.6	34.8	26.7	22.7	27.2	29.3	24.5	xxx	XXX	XXX

* Gross capability (Table I, item 1 + 2) less total firm demand on the provinces (Table I, item 7 + 3).

TABLE V

INDICATED RESERVE*

Thousands of Kilowatts

PROVINCE	1950	1054	0 1	1056	100	i.	6		FOREC	AST		PERCE	PERCENTAGE CHANGE	NGE
		100	1933	00661	/567	1958	1959	1960	1961	1962	1963	1955-	1959-	1955-
Onebec														
1. Gross capability 2. Total firm demand on the province	4,397	5,418	5,625	5,901	6,468	7,062 6,105	7,690 6,219	8,771	8,793	8,890	9,340	36.7	21.4 24.8	66.0
3. Indicated reserve (1 - 2)	435	551	429	361	094	957	1,471	2,056	1,752	1,440	1,580	XXX	XXX	XXX
of Fotal firm demand	11.0	11.3	8.3	6.5	7.7	15.7	23.6	30.6	24.9	19.3	20.4	xxx	XXX	XXX
Ontario														
1. Gross capability 2. Total firm demand on the province	3,307	4,820	5,229	5,267	5,637 5,456	6,549	6,967	7,754 6,558	7,957	8,249	8,789	33.2	26.1	68.1
 Indicated reserve (1 - 2) Indicated reserve expressed as a % 	- 70	473	368	116	181	899	725	1,196	966	831	971	XXX	XXX	XXX
of total firm demand		11.1	7.7	2.3	3.3	11.4	11.6	18.2	14.3	11.2	12.4	XXX	X	XXX
Manitoba														
1. Gross capability 2. Total firm demand on the province	496	976	672 608	666	708	802	806	1,090	1,093	1,093	1,093	19.9 13.5	35.6	62.6
3. Indicated reserve (1 - 2) 4. Indicated reserve expressed as a %	89	102	79	47	98	156	116	276	209	169	124	XXX	XXX	XXX
of total firm demand	15.9	18.7	10.5	7.6	13.8	24.1	16.8	33.9	23.6	18.3	12.8	XXX	XXX	XXX
Saskatchewan														
1. Gross capability 2. Total firm demand on the province	214	328 276	339	402	463	539	672	778 503	780	780	914	98.2	36.0	169.6
 Indicated reserve (1 - 2) Indicated reserve expressed as a % 	18	52	33	09	95	118	223	275	225	166	242	XXX	XXX	XXX
of total firm demand	20.0	21.3	12.0	17.5	25.8	28.0	49.7	54.7	40.5	27.0	36.0	XXX	XXX	XXX

^{*} Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3).

INDICATED RESERVE* TABLE V

Thousands of Kilowatts

				F1	Thousands of Kilowatts	ot Kilowa	tts							
									FOREC	AST		PERCEN	PERCENTAGE CHANGE	E
PROVINCE	1950	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1955-	1959-	1955-
Alberta														
1. Gross capability 2. Total firm demand on the province	191	313	458	562 451	592 476	738	771 650	925	965 809	1,115	1,188	65.0	54.1	159.4
3. Indicated reserve (1 - 2)	12	87	79	111	116	157	121	195	156	216	188	XXX	xxx	XXX
4. Indicated reserve expressed as a % of total firm demand	6.7	27.8	16.2	24.6	24.4	27.0	18.6	26.7	19.3	24.0	18.8	XXX	xxx	XXX
British Columbia														
1. Gross capability 2. Total firm demand on the province	951 829	1,708	1,750	2,071	2,350	2,568	2,877	3,023	3,190	3,448 2,471	3,443	39.8	34.3	96.7
3. Indicated reserve (1 - 2)	122	399	344	342	525	629	911	862	879	776	803	XXX	XXX	ххх
4. Indicated reserve expressed as a % of total firm demand	14.7	30.5	24.5	19.8	28.8	32.4	46.3	39.9	38.0	39.5	30.4	ххх	ххх	жжж
Yukon and N.W.T.														
1. Gross capability 2. Total firm demand on the province	21 14	24	22 19	23	26	30	31	35	53	39	53	86.4	29.3	140.9
3. Indicated reserve (1 - 2)	7	9	60	4	7	10	10	18	16	14	12	ххх	XXX	XXX
4. Indicated reserve expressed as a % of total firm demand	50.0	33.3	15.8	21.1	36.8	33.3	32.2	51.4	43.2	35.9	29.3	XXX	XXX	XXX
CANADA														
 Gross capability Total firm demand on Canada 	9,363	13,332 11,535	14,152	15,039	16,469	18,628 15,720	20,205	22,841 17,681	23,329	24,261 20,105	25,487	42.8	30.1	80.1
3. Indicated reserve (1 - 2)	657	1,797	1,450	1,177	1,653	2,908	3,852	5,160	4,513	4,156	4,211	XXX	XXX	XXX
 Indicated reserve expressed as a % of total firm demand 	7.5	15.6	11.4	8.5	11.2	18.5	23.5	29.2	24.0	20.7	19.8	XXX	XXX	XXX

^{*} Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3).

CANADIAN ELECTRICAL ASSOCIATION ELECTRIC POWER STATISTICS COMMITTEE

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The Policy Sub-Committee serves as an over-all co-ordinating agency for these surveys, the connecting link between the Dominion Bureau of Statistics, The Canadian Electrical Association and the interests of the electric power utility industry-at-large.

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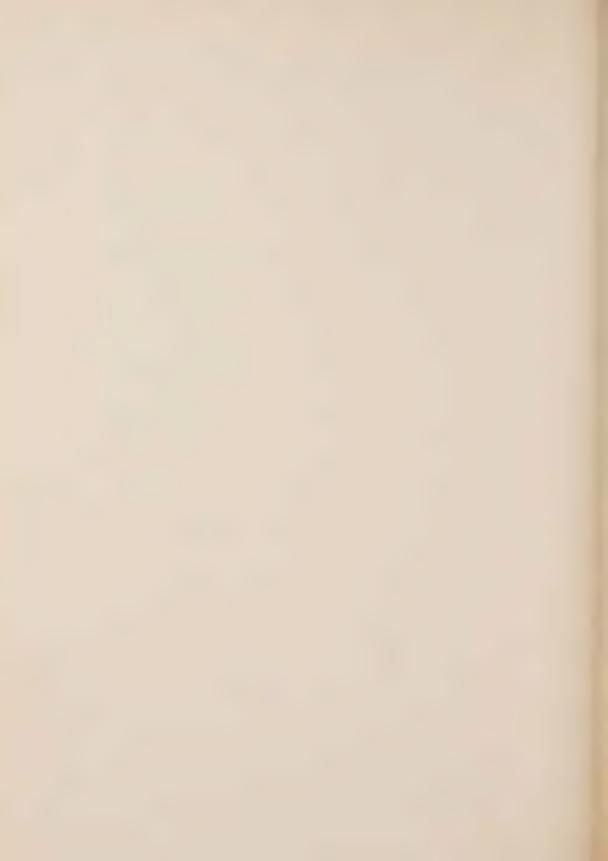
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Members of the Surveys Sub-Committee serve as area representatives. The function of an area representative is primarily to act as the direct liaison betwee the company representatives in his area and the Dominion Bureau of Statistics on a matters relating to the power survey.





CATALOGUE No.

57-204

ANNUAL



Seventh

ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

1960 Actual 1961 - 1964 Forecast



DOMINION BUREAU OF STATISTICS

Public Finance and Transportation Division
Public Utilities Section



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ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

1960 **A**ctual 1961 - 1964 **F**orecast

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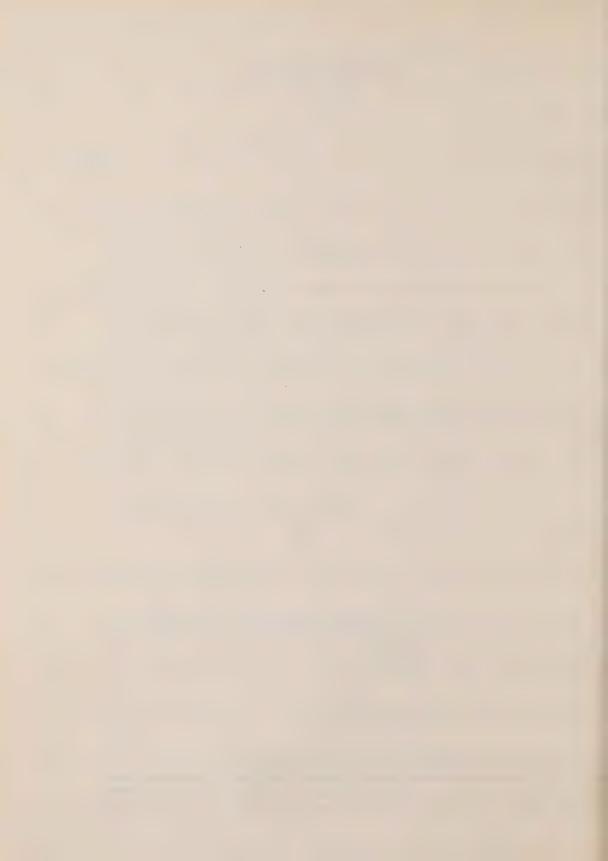
Reports Published by the Public Finance and Transportation Division dealing with

ELECTRIC POWER

number	TILLE	Price
	Annual	
57-201	Electric and Gas Meter Registrations. Approx. 200 pp.	
	Meter registrations by province, county or census division, company and place served, by type of service	\$2.00
57-202	Electric Power Statistics. Approx. 48 pp.	
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	Includes an annual index of electricity bills for domestic service, and bills for light and power in cities and representative municipalities	.50
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	Current and projected data of capability and load of major producers of electric energy in Canada	.50
	Monthly	
57-001	Electric Power Statistics. Approx. 4pp.	
	Production by utilities and industrial establishments, imports and exports, power made available for use in Canada, amount used in electric boilers, by provinces. Per copy 10¢; per year	\$1.00
	Occasional	
57-501	Inventory of Prime Mover and Generating Equipment. Approx. 96pp.	
	A list of the large generating plants in Canada by owner-ship, showing the location, year of installation, name-plate rating and other details of each large unit, as at December 31, 1958	\$1.00

TABLE OF CONTENTS

		Page
Int	roduction	5
Rev	view of Survey Results	6
Dei	finitions	8
	<u>CHARTS</u>	
A:	Net Generating Capability within Canada, 1950 through 1964	10
В:	Net Capability and Firm Demand within Canada, 1950 through 1964	11
3:	Net Generating Capability within Provinces, 1950 through 1964	12
):	Net Capability and Firm Demand within Provinces, 1950 through 1964	14
₫:	Firm Energy Requirement within Canada, 1950 through 1964	16
	TABLES	
l.	Summary by Provinces and Canada, 1950, 1955 through 1964	17
) -•	Net Generating Capability within Provinces, 1950, 1955 through 1964	29
}.	Firm Power Peak Load within Provinces, 1950, 1955 through 1964	30
. •	Indicated Firm Energy Requirement within Provinces, 1950, 1955 through 1964	31
٠.	Indicated Reserve, 1950, 1955 through 1964	32
ar	adian Electrical Association Policy Sub-Committee	35
ur	veys Sub-Committee	36



Introduction

This report presents the results of the seventh annual Electric Power Survey of Capability and Load which was conducted in March 1961 by the Dominion Bureau of Statistics in cooperation with the Canadian Electrical Association. The Electric Power Survey embraces all producers of electric energy in Canada which generate .0,000,000 kilowatt hours or more per annum. The 1961 report is based on returns from 145 companies, half of which are utilities and the other half industrial establishments which generate power primarily for own use. As these 145 producers account for approximately 99 per cent of total generation in Canada, figures presented in this report may be regarded as being representative of the entire industry.

The statistics presented are for the years 1950, and 1955 - 1964 inclusive, he latter four years on a forecast basis. Capability and load figures are based on he situation as it existed at the time of each company's annual firm power peak oad.

Net generating capability is the output that can be maintained at the time f annual firm power peak load after power used in station service is deducted. It s calculated on the basis of actual operating experience assuming all equipment in orking order and available for use. Net generating capability should not be constued as representing installed capacity, a term used in reference to the name plate atings of generating equipment as designated by the manufacturers.

The power situation in any province or for the country as a whole can be resented in several ways. Two of these are contained in the report and are based a the demand within the province (Table 1) and the demand on the province (Table 3). a each case the appropriate capability is also shown. Demand within the province related to net capability which means net generating capability plus purchases sess deliveries outside the province.

Statistics of the power situation within Canada and within the individual Fovinces provide a measure of the growth of the industry within geographic areas and indicate the contribution of the industry to the economic growth of the country a whole. Demand on the province, however, is related to gross capability which generating capability plus purchases outside the province and is of interest rimarily from a utility point of view.

Some care must be exercised in the interpretation of these data. For cample, the difference between gross capability and total firm demand is an indication of available reserves of power. Since power producers are not, however, all illy interconnected, reserves of power cannot always be completely utilized.

Review of Survey Results

Net generating capability: Net generating capability in Canada rose 10.6 per cent in 1960 to 22,340,000 kilowatts from the 1959 total of 20,205,000. The increase was just under the 9.2 per cent annual growth rate over the ten-year period covered since the survey was inaugurated and compares with an increase of 13.1 per cent fore cast for 1960. Greatly below-average increases of 3.7, 4.7, 5.6 and 3.9 per cent are planned for 1961, 1962, 1963 and 1964 because of the substantial reserves which have been built up since 1956. In 1964, net generating capability at 26,530,000 kilowatts will have advanced some 18.8 per cent over the current level.

The generating capability increase planned for the next four years will be 65 per cent thermal compared with less than 20 per cent in the four-year period ended 1959. Thermal generating capability will account for 24.6 per cent of the total in 1964, against 17.2 per cent in 1960.

Since 1950, thermal generating capability has had an annual growth rate of 17.1 per cent; additions between 1960 and 1964 are expected to average 14.4 per cent The Annual rate of increase in hydro generating capability, which has been 8.0 per cent, between 1950 and 1960, is forecast to decline sharply to 2.8 per cent during the next four years.

Firm power peak load: Firm power peak load within Canada in 1960 amounted to 17,264, 000 kilowatts, an increase of 6.6 per cent over the 1959 total of 16,201,000. The forecast for 1964 is 21,989,000 kilowatts, an estimated rise of 27.4 per cent. Annual rates of increase have averaged 7.4 per cent since 1950, slightly higher than the 6.9 per cent forecast for the next four years. The forecast rate of increase, however, is somewhat higher than the 6.3 per cent achieved in the last four years.

During the eight-year period 1956-1964, a growth in firm power peak load of 183.3 per cent is indicated in Prince Edward Island, and 131.5 per cent in Albert and 123.4 per cent in Saskatchewan. The increase for all Canada during this period is expected to approximate 61 per cent.

Indicated Reserve: The indicated reserve for Canada rose sharply in 1960 to 4,910,000 kilowatts from the revised total of 3,852,000 in 1959. By 1964 it will decrease slightly to 4,419,000 kilowatts, and represent only 20.0 per cent of firm demand as compared with this year's 28.2 per cent. From a low of 7.8 per cent in 1956 the margin of reserve reached a peak of 28.2 per cent in 1960 and will slowly subside to the 1964 level of 20.0 per cent.

Reserves for individual provinces varied in 1960 from a high of 49.4 per cent in Saskatchewan to a low of 13.2 per cent in Manitoba.

Firm Energy Requirement: Firm energy requirement rose 8.9 per cent in 1960 to 101, 982,000,000 kilowatt hours from 93,656,000,000 in 1959. The annual rate of increase of 6.3 per cent over the next four years is expected to result in a firm energy requirement of 130,256,000,000 kilowatt hours by 1964. The comparative stability of the rate of growth in firm energy requirement is evidenced by the fact that annual increments during the period 1950-1959 was 7.3 per cent.

- Firm energy requirement within provinces showed much wider variations. During the eight-year period 1956-1964, firm energy requirement will increase 147.8 per cent in Saskatchewan, 125.8 per cent in Alberta and 122.6 per cent in Prince Edward Island. The comparable rate of growth for all Canada is 59.9 per cent.
- Chart A Net Generating Capability Within Canada (Page 10): This chart graphically portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important.
- Chart B Net Capability and Firm Demand Within Canada (Page 11): Chart B provides an indication of the reserves available to meet firm demand for electric power within Canada.
- Chart C Net Generating Capability Within Provinces (Pages 12-13): Chart C illustrates the growth in capability and the comparative importance of hydro and thermal generation within provinces.
- Chart D Net Capability and Firm Demand Within Provinces (Pages 14-15): This chart provides a graphic indication of the year to year ability of each of the provinces to meet its firm demand for electric power.
- hart E Firm Energy Requirement Within Canada (Page 16): Chart E shows the growth n Canadian firm energy requirement during the period 1950 1964.
- able 1 Summary (Pages 17-28): This table summarizes capability, firm power eak load, indicated reserve and firm energy requirement for Canada and for each of he provinces.
- able 2 Net Generating Capability Within Provinces (Page 29): This table compares rovincial rates of growth in net generating capability.
- able 3 Firm Power Peak Load Within Provinces (Page 30): This table compares rates f growth of firm power peak load within provinces.
- able 4 Indicated Firm Energy Requirement Within Provinces (Page 31): This table ompares rates of growth of firm energy requirement within provinces.
- This table shows the relationship between the demand for power and the ability to meet it in each of the provinces and in (mada as a whole. Demand on the province consists of firm power peak load within the province plus any indicated shortage or rejected load plus firm power deliveries (tside the province. Gross capability consists of net generating capability (hydro ad thermal) within the province plus purchases of firm power under firm obligation from sources outside the province. The difference between gross capability and firm chand is the indicated reserve, and this, expressed as a percentage of total firm dhand, can be used as a measurement of the industry's ability to satisfy demand and met contingencies. Since not all systems are fully interconnected it should be the membered that reserves of power cannot always be completely utilized.

DEFINITIONS

FIRM ENERGY REQUIREMENT

Energy required to meet firm obligations, or for use in own industrial plant other than in electric boilers.

FIRM POWER

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

FIRM POWER PEAK LOAD

The annual FIRM POWER maximum average net kilowatt load of one hour duration within the UTILITY, SYSTEM or INDUSTRIAL ESTABLISHMENT.

FIRM OBLIGATIONS

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis.

INDICATED DEMAND

The sum of firm power peak load and indicated shortage.

INDICATED RESERVE

Net capability less indicated demand (+ or -).

INDUSTRIAL ESTABLISHMENT

A firm which generates power primarily for use in own plants.

NET GENERATING CAPABILITY

The maximum net kilowatt output (after station service) available from the generating facilities of the UTILITY, SYSTEM or INDUSTRIAL ESTABLISHMENT with all equipment available, at the time of the annual FIRM POWER PEAK LOAD, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

NET CAPABILITY

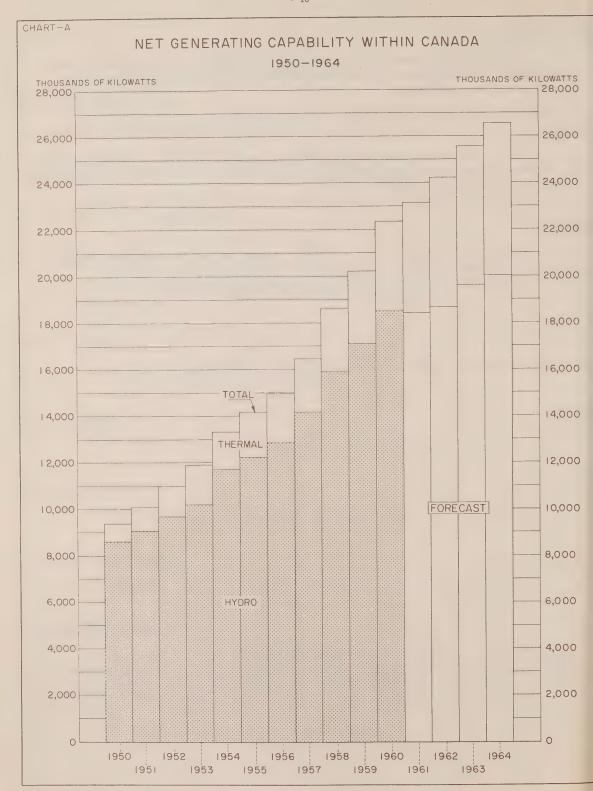
The sum of net generating capability and purchases of firm power under firm obligation from other utilities less deliveries of firm power under firm obligation to other utilities.

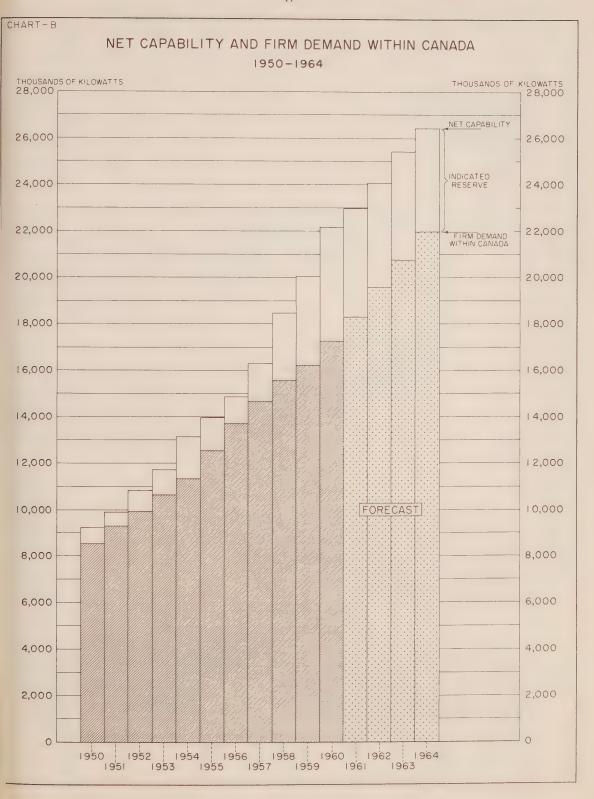
SYSTEM

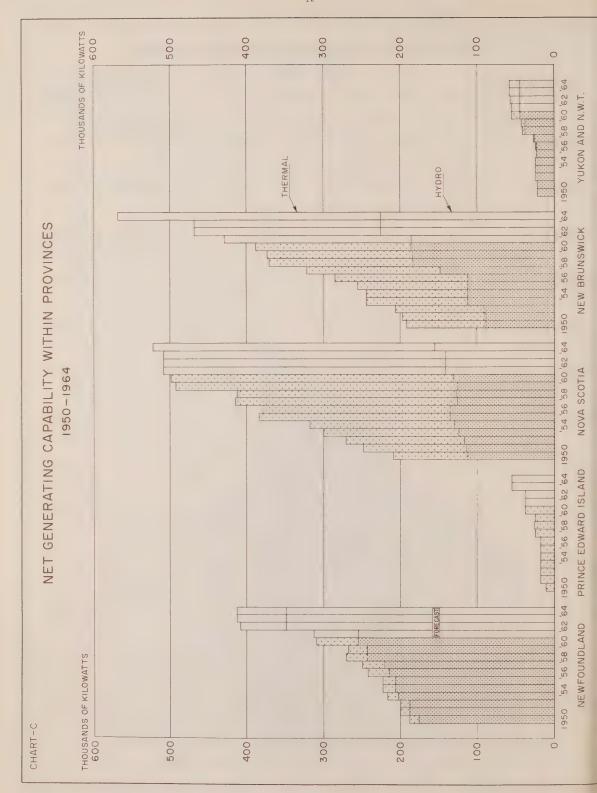
Two or more UTILITIES, having interconnections for the exchange of power, which although they may be separately incorporated, are controlled, managed or operated by one principal UTILITY.

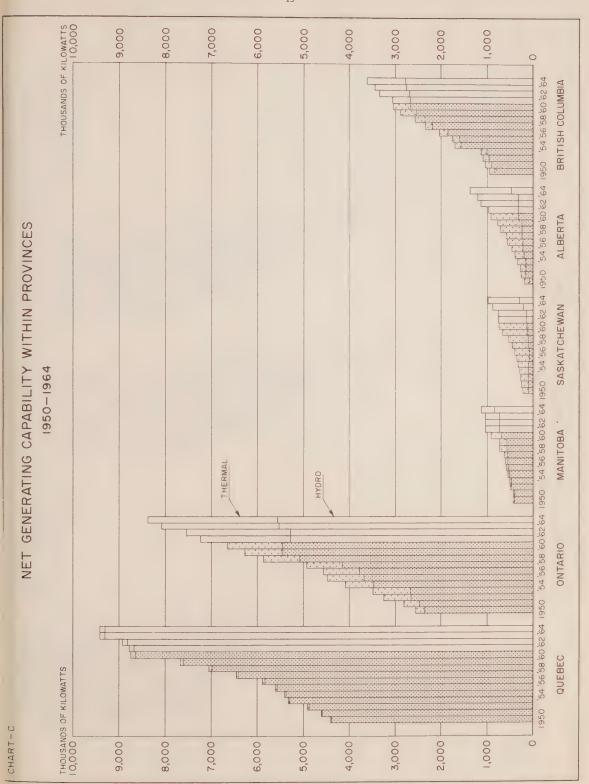
UTILITY

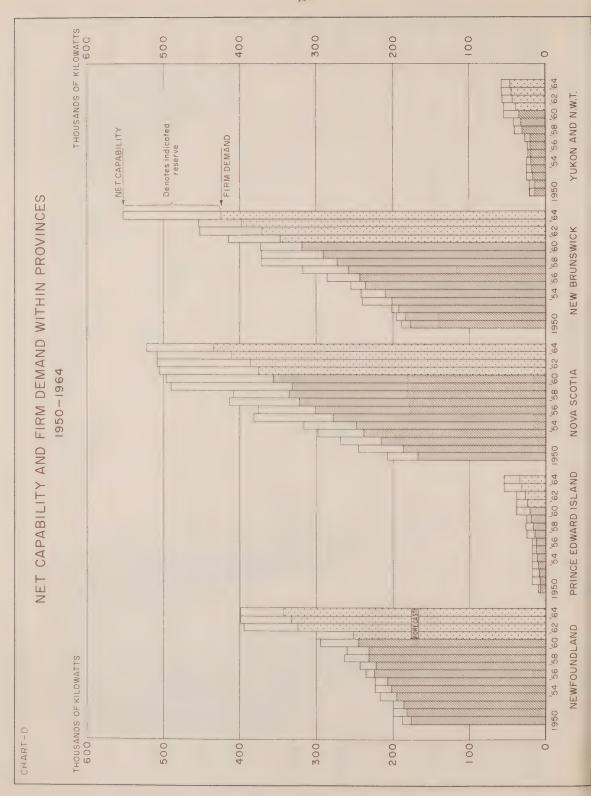
The Company, Commission, or UTILITY reporting or included in a SYSTEM report under Section IV (which generates at least part of its own power).

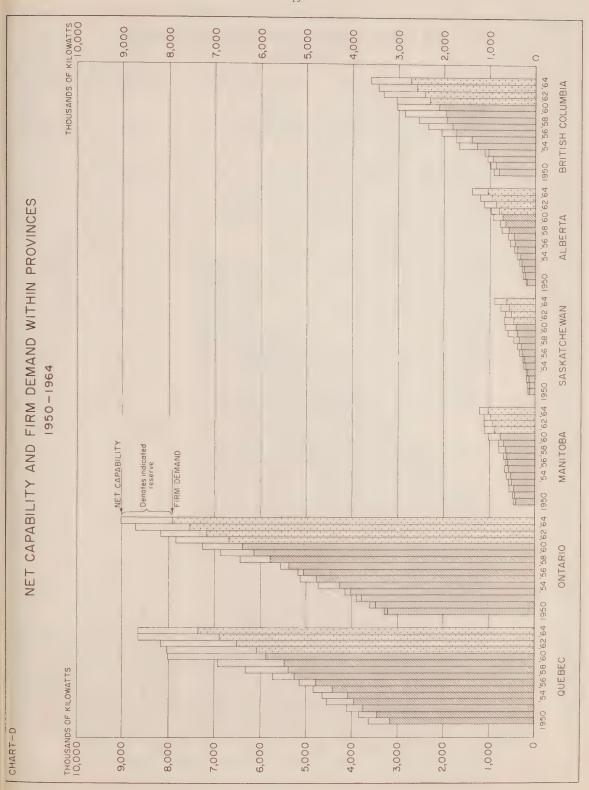


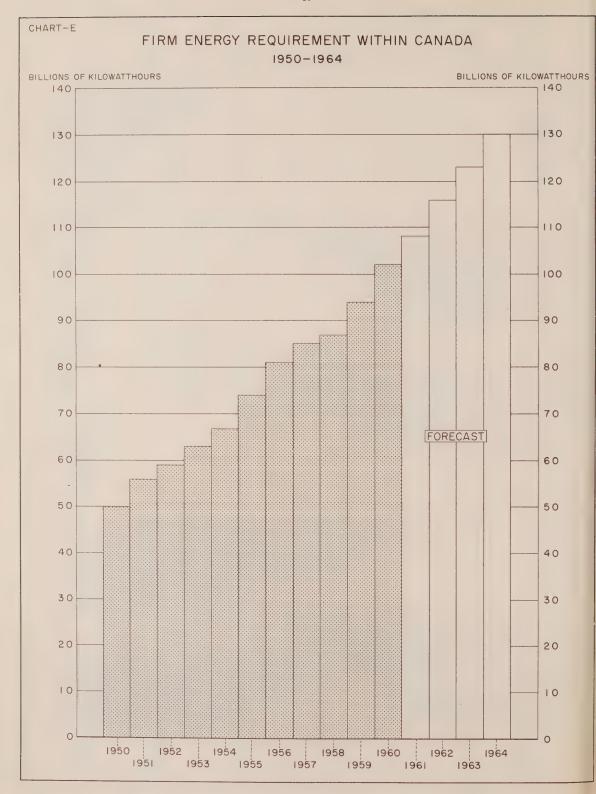












Can
Summary
;
TABLE

TABLE 1. Summary - Newfoundland (including Labrador)

									FORECAST	CAST	
	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
					Thousa	Thousands of kilowatts	owatts				
S1											
1. Net generating capability:	0.00	100	, ,	000	676	676	u c	c c	976	076	0%
(a) Hydro (b) Thermal	176	207	215	220	243	243	54	255	948	348 64	348 64
2. Receipts of firm power from:											
(a) Other provinces (b) United States	1 1	1 1	1 1		1 1	1 1		1 1	1 1	1 1	()
3. Deliveries of firm power to:											
(a) Other provinces(b) United States	1 1	1 1	91	91	00 I	r -	14 -	13	13	13	13
4. Net capability (1 + 2 - 3)	188	223	236	243	263	260	295	300	395	399	399
				ACTUAL					FORECAST	CAST	
FIRM POWER PEAK LOAD:											
5. Within Province	177	206	222	222	231	231	245	251	324	332	342
6. Indicated shortage	٠	-	2	•	1	1	3	,	,	•	'
7. Indicated demand within Province (5 + 6)	177	207	224	222	231	231	245	251	324	332	342
INDICATED RESERVE: 8. Difference (4 = 7)	+11	+16	+12	+21	+32	+29	+50	67+	+71	+67	+57
,					Millions	of kilowatt-hours	tt-hours				
FIRM ENERGY REQUIREMENT: 9. Firm energy requirement within Province	1,058	1.289	1.374	1,333	1,320	1,369	1,429	1,462	1,674	1,715	1,788
10. Indicated shortage	1	10	ě	•	ı	1	ı	ı	,	1	t
 Indicated firm energy requirement within Province (9 + 10) 	1,058	1,299	1,374	1,333	1,320	1,369	1,429	1,462	1,674	1,715	1,788
12. Deliveries of firm energy to:											
(a) Other provinces (b) United States	1 1	1 1	31	46	44	33	- 64	- 67			
(c) Total (a + b)	'	1	31	949	44	33	67	67	67	67	67
13. Firm energy requirement on Province (11 + 12)	1,058	1,299	1,405	1,379	1,364	1,402	1,478	1,511	1,723	1,764	1,837

									PORECAST	AST	
	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
					Thousar	Thousands of kilowatts	watts				
CAPABILITY:											
1. Net generating capability:											
(a) Hydro (b) Thermal	10	18	18	25	26	25	38	38	300	55	55
2. Receipts of firm power from:											
(a) Other provinces (b) United States	1 1		1 1		1 1	1 1	1.1		1 1	1 1	1 1
3. Deliveries of firm power to:											
(a) Other provinces(b) United States	1 1	1 1	t t	1 1	1 1	1 1			1 1	1 1	1 1
4. Net capability $(1 + 2 - 3)$	10	18	18	25	26	25	38	38	38	55	55
				ACTUAL					FORECAST	AST	
FIRM POWER PEAK LOAD:											
5. Within Province	00	12	12	14	16	19	21	24	27	31	34
6. Indicated shortage	1		1	ŧ			1		ı	•	,
7. Indicated demand Within Province (5 + 6)	00	12	12	14	16	19	21	24	27	31	34
INDICATED RESERVE: 8. Difference (4 - 7)	+ 2	9 +	9 +	+11	+10	9 +	+17	7[+	11	7/2+	+21
					Millions	Millions of kilowatt-hours	t-hours				
PIRM ENERGY REQUIREMENT: 9. Firm energy requirement within Province.	. 31	51	53	09	69	81	85	06	86	108	118
10. Indicated shortage	1	٠	1	1	1	ŧ	1	(•	1
11. Indicated firm energy requirement within Province (9 + 10)	31	51	53	09	69	81	85	06	86	108	118
12. Deliveries of firm energy to:											
(a) Other provinces (b) United States.	1 1	1 1	1 1	1 1	1 1	1-1	1 1		1 1		1 (
(c) Total (a + b)	ŧ	ı	1	1	4	1	1	đ	1	1	5
13. Firm energy requirement on Province (11 + 12)	31	51	53	09	69	81	85	06	98	108	118

									FORECAST	TAST	
	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
					Thousan	Thousands of kilowatts	watts				
CAPABILITY:											
1. Net generating capability:											
(a) Hydro (b) Thermal	113	136 248	136 242	126 289	127	126 367	132	141	141	141 367	155
2. Receipts of firm power from:											
(a) Other provinces(b) United States	1 1	1 1	1 1	1 1	1 1	()	1 1	1 1	1 1	1 1	t 1
3. Deliveries of firm power to:											
(a) Other provinces(b) United States	- 2	- 2	61	1 5	m I	က၊	en i	ო I	1 1	1 1	1 1
4. Net capability (1 + 2 = 3)	207	382	376	413	807	067	967	505	508	508	522
				ACTUAL					FORECAST	CAST	
FIRM POWER PEAK LOAD:											
5. Within Province	163	278	301	322	335	330	356	375	386	411	434
6. Indicated shortage	4	1	•	1	•		1	,	•		
7. Indicated demand within Province (5 + 6)	167	278	301	322	335	330	356	375	386	411	434
INDICATED RESERVE:											
8. Difference (4 = 7)	07 +	+ 104	+ 75	+ 91	+ 73	+ 160	+ 140	+ 130	+ 122	+ 97	+ 88
TON DATE DATE DESCRIPTION OF STATE OF S					Millions	Millions of kilowatt-hours	tt-hours				
9. Firm energy requirement within Province	874	1,340	1,464	1,447	1,551	1,634	1,707	1,828	1,923	2,027	2,137
10. Indicated shortage	1	1	٠	•			1	1		•	•
11. Indicated firm energy requirement within Province $(9+10)$	874	1,340	1,464	1,447	1,551	1,634	1,707	1,828	1,923	2,027	2,137
12. Deliveries of firm energy to:											
(a) Other provinces(b) United States	9 1	00 I	CO 1	00 I	10	14	79	91		1 1	1 1
(c) Total (a + b)	9	80	æ	80	10	14	79	9	,	'	1
13. Firm energy requirement on Province (11 + 12)	880	1,348	1,472	1,455	1,561	1,648	1,786	1,834	1,923	2,027	2,137

									FORE	FORECAST	
	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1967
					Thousa	Thousands of kilowatts	owatts				
CAPABILITY: 1. Net generating capability:											
(a) Hydro (b) Thermal	90 102	112	112	148	185	185	186 202	186 243	226 243	226 243	226 343
2. Receipts of firm power from:											
(a) Other provinces (b) United States	- 2	4 1	N I	ا ک	00 I	7 -	7 :	7 -	In t	VA E	vnι
3. Deliveries of firm power to:											
(a) Other provinces (b) United States	. 2	1 40	11/0	1 00	1 6	1 0	23	22	22	21	21
4. Net capability (1 + 2 - 3)	189	255	286	318	371	371	372	414	452	453	553
				ACTUAL					FORECAST	CAST	
FIRM POWER PEAK LOAD:											
5. Within Province	177	235	243	258	273	291	319	347	371	398	454
6. Indicated shortage	•	-	t	1	1	1	1	,	1	1	'
7. Indicated demand within Province (5 + 6)	177	236	243	258	273	291	319	347	371	398	454
	1	0	67	4	80	C C	7	1 67	100	4	001
o. Dillerence (4 = /)	II.	15	II.	H	-	of	9	Įį.	H	1	
PIRM ENERGY REQUIREMENT:											
9. Firm energy requirement within Province	970	1,248	1,275	1,347	1,402	1,523	1,667	1,888	2,014	2,182	2,292
10. Indicated shortage	ı	,	1	•	1	1	t	t	1		1
11. Indicated firm energy requirement within Province $(9+10)$	970	1,248	1,275	1,347	1,402	1,523	1,667	1,888	2,014	2,182	2,292
12. Deliveries of firm energy to:											
(a) Other provinces (b) United States	41	# 69	32	29	63	51	1 92	136	135	139	142
(c) Total (a + b)	41	33	32	29	63	51	58	136	135	139	145
13. Firm energy requirement on Province (11 + 12)	1,011	1,281	1,307	1,376	1,465	1,574	1,725	2,024	2,149	2,321	2,434
- 1											

TABLE 1. Summary - Quebec

									PORECAST	AST	
	1050	1055	1056	1057	10.50	1050	1960	1961	1040	1043	1001
	1950	1955	1936	1937	1938		1960	1961	7967	1963	1964
A DAR DITTTO.					Thousands	nds of kilowatts	watts				
1. Net generating capability:											
(a) Hydro (b) Thermal	4,391	5,583	5,854	6,406	6,992	7,612	8,658	8,678	8,816	9,311	9,311
2. Receipts of firm power from:											
(a) Other provinces (b) United States	⊣ ,	1 2	7	L 1	6 1	6 1	16	15	15	15	15
3. Deliveries of firm power to:											
(a) Other provinces (b) United States	732 56	729	691 56	694	673	969	698	700	703	707	708
4. Net capability $(1 + 2 - 3)$	3,630	4,840	5,154	5,718	6,332	6,937	8,025	8,043	8, 183	8,673	8,673
				ACTUAL					FORECAST	AST	
FIRM POWER PEAK LOAD:											
5. Within Province	3,174	4,367	4,749	5,256	5,375	5,466	5,871	6,103	6,521	6,911	7,353
6. Indicated shortage	•	7,7	77	2	•	1	i	ı		•	ı
7. Indicated demand within Province (5 + 6)	3,174	4,411	4,793	5,258	5,375	5,466	5,871	6,103	6,521	6,911	7,353
INDICATED RESERVE:											
8. Difference (4 - 7)	+ 456	+ 429	+ 361	097 +	+ 957	+1,471	+2,154	+1,940	+1,662	+1,762	+1,320
PIBM PAPECY BEGITDEMENT.					Millions	of kilowatt-hours	t-hours				
9. Firm energy requirement within Province	20,442	29,479	30,331	30,572	31,763	33,303	38,323	39,958	42,932	42,874	49,048
10. Indicated shortage	123	362	1,546	240	ı		•	,	1		1
11. Indicated firm energy requirement within Province $(9\ +\ 10)$	20,565	29,841	31,877	31,112	31,763	33,303	38,323	29,958	42,932	45,874	49,048
12. Deliveries of firm energy to:											
(a) Other provinces (b) United States	4,425	4,260	4,117	4,075	4,205	4,211	4,193	4,202	4,220	4,234	4,240
(c) Total (a + b)	4,915	4,750	4,608	4,560	4,695	4,703	4,689	4,693	4,711	4,725	4,731
13. Firm energy requirement on Province (11 + 12)	25,480	34,591	36,485	35,672	36,458	38,006	43,012	44,651	47,643	50,599	53,779

									PORECAST	CAST	
	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1967
					Thousands	of	kilowatts				
CAPABILITY:											
1. Net generating capability:											
(a) Hydro (b) Thermal	2,367	3,688	3,778	4,145	5,081	5,467	5,464	5,286	5,286	5,543	5,557
2. Receipts of firm power from:											
(a) Other provinces (b) United States	741	741	702	705	999	692	-	969	669	702	703
3. Deliveries of firm power to:											
(a) Other provinces (b) United States	85	85	86	1 86	86	86	2 86	90	45	47	45
4. Net capability $(1 + 2 - 3)$	3,221	5,143	5,180	5,550	6,462	6,879	7,256	7,846	8, 192	8,733	9,032
				ACTUAL					FORECAST	CAST	
FIRM POWER PEAK LOAD:											
5. Within Province	3,078	4,757	5,064	5,369	5,794	6,154	6,391	6,690	7,166	7,533	7.939
6. Indicated shortage	213	18		1	5	t	1	ı			1
7. Indicated demand within Province $(5+6)$	3,291	4,775	5,064	5,369	5,794	6,154	6,391	6,690	7,166	7,533	7,939
INDICATED RESERVE:											
8. Difference (4 ~ 7)	- 70	+ 368	+ 116	+ 181	+ 668	+ 725	+ 865	+1,156	+1,026	+1,200	+1,093
					Millions	of	kilowatt-hours				
Firm energy requirement within Province	18,016	26,376	28,875	30,768	31,401	34,844	36,216	37,700	40,423	42,383	44,750
10. Indicated shortage	255	9	ı	1	1	ı	1	1	1	1	t
11. Indicated firm energy requirement within Province $(9+10)$	18,271	26,382	28,875	30,768	31,401	34,844	36,216	37,700	40,423	42,383	44,750
12. Deliveries of firm energy to:							0.00				
(a) Other provinces(b) United States	703	9 687	703	658	711	710	727	677	400	303	303
(c) Total (a + b)	705	069	707	662	716	715	733	683	406	309	309
13. Firm energy requirement on Province (11 + 12)	18,976	27,072	29,582	31,430	32,117	35,559	36,949	38,383	40,829	42,692	45,059
	San		SCHOOL SECTION AND ADDRESS OF THE PERSON AND	And spinsters on the contrast of	NAME OF TAXABLE PARTY.	Company of the Compan					

TABLE 1. Summary - Manitoba

									FORE	FORECAST	
	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
					2000	ando of bil	1 1 1 mes 6 % 0				
CAPABILITY					Penolit	HIND OF REE	OWALLB				
1. Net generating capability:											
(a) Bydro (b) Thermal	85	82 257	320	376	87	583	99	103	103	203	304
2. Receipts of firm power from:											
(a) Other provinces (b) United States	1 1	1 1	1 1	1 1	e-l #	- 1 €	1	1 1	1 1	1 1	1 1
3. Deliveries of firm power to:											
(a) Other provinces(b) United States	00 t	79	79	69	89 1	72	98	98	87	137	87
4. Net capability $(1 + 2 - 3)$	146	260	338	394	471	009	299	670	699	749	006
				ACTUAL					FORE	FORECAST	
FIRM POWER PEAK LOAD:											
5. Within Province	128	227	278	299	353	377	418	470	517	267	621
6. Indicated shortage	ı	1	ŧ	ı	•	,	ı	1	•	ı	r
7. Indicated demand within Province $(5+6)$	128	227	278	299	353	377	418	470	517	295	621
INDICATED RESERVE:											
8. Difference (4 = 7)	+ 18	+ 33	09 +	+ 95	+ 118	+	+ 249	+ 200	+ 152	+ 182	+ 279
FIRM ENERGY RECLIFEEMENT:					Millions	Jo	kilowatt-hours				
9. Firm energy requirement within Province	405	877	1,047	1,276	1,422	1,527	1,698	1,915	2,116	2,353	2,594
10. Indicated shortage	1	,	•	ı	1	1	•	1	•	1	ŧ
11. Indicated firm energy requirement within Province $(9+10)$	405	877	1,047	1,276	1,422	1,527	1,698	1,915	2,116	2,353	2,594
12. Deliveries of firm energy to:											
(a) Other provinces (b) United States	200	571	554	503	504	517	575	572	614	614	614
(c) Total (a + b)	200	571	554	503	504	517	575	572	614	614	614
13. Firm energy requirement on-Province (11 + 12)	905	1,448	1,601	1,779	1,926	2,044	2,273	2,521	2,730	2,967	3,208
	The second secon		Name and Address of the Owner, where	The state of the s	STREET, SQUARE, STREET, SQUARE, SQUARE	THE RESERVE THE PROPERTY OF THE PERSON NAMED IN	and a second second second second	district and a second and a second	STATE OF COMPANY OF PERSONS	NAME AND ADDRESS OF THE OWNER,	0.000

TABLE 1. Summary - Alberta

1950 1. Net generating capability: (a) Hydro (b) Thermal 2. Receipts of firm power from: (a) Other provinces (b) United States 3. Deliveries of firm power to: (c) Other provinces (d) Other provinces (e) Other provinces (e) Deliveries of firm power to: (b) United States (c) Deliveries of firm power to: (c) The provinces (d) Other provinces (e) The provinces (e) The provinces (f) The provinces (g) The pr	1955 220 220 238	1956	1957	1958	1959	1960	1961	1962	1963	1964
generating capability: Hydro Thermal Lipts of firm power from: Other provinces United States Veries of firm power to: Other provinces	220 238									
Reduce the second secon	220			Thousar	Thousands of kilowatts	owatts				
Net generating capability: (a) Hydro (b) Thermal Receipts of firm power from; (a) Other provinces (b) United States Deliveries of firm power to: (a) Other provinces (b) This of the provinces (c) This of the provinces (d) Other provinces	220									
(a) Hydro (b) Thermal Receipts of firm power from: (a) Other provinces (b) United States Deliveries of firm power to: (a) Other provinces (b) Indical envises	220									
Receipts of firm power from: (a) Other provinces (b) United States Deliveries of firm power to: (a) Other provinces (b) The confirm power to:		338	238	238	238	318	318	318	318 878	468
(a) Other provinces (b) United States Deliveries of firm power to: (a) Other provinces (b) Tradical States										
Deliveries of firm power to: (a) Other provinces (b) Tractad execution	1 1	4 :	7	4 -	e 1	en i	m 1	10 I	L 1	6 1
	<i>හ</i> :	1 (1 1	≓ 1	ल ।	el 1		1 1	1 7	1 1
4. Net capability (1 + 2 - 3)	455	562	592	737	770	927	976	1,132	1,203	1,392
			ACTUAL					FORE	FORECAST	
FIRM POWER PEAK LOAD:										
5. Within Province	391	451	476	580	649	714	792	870	955	1,044
6. Indicated shortage										
7. Indicated demand within Province (5 + 6) 176	391	451	476	580	649	714	792	870	955	1,044
INDICATED RESERVE:										
8. Difference (4 = 7) + 12	+ 64	+ 111	+ 116 +	+ 157	+ 121	+ 213	+ 184	+ 262	+ 248	+ 348
FIRM RAPRCY RROUTERMENT.				Millions	Millions of kilowatt-hours	att-hours				
9. Firm energy requirement within Province 1,023	1,859	2,180	2,454	2,760	3,156	3,481	3,778	4,125	4,508	4,923
10. Indicated shortage	1	٠	i	1	٠	ı	1	1	1	,
 Indicated firm energy requirement within Province (9 + 10) 	1,859	2,180	2,424	2,760	3,156	3,481	3,778	4,125	4,508	4,923
12. Deliveries of firm energy to:										
(a) Other provinces (b) United States	1 1	1 1	4 1	1 (ו חי	က I	1 1	1 1	1 1	1 1
(c) Total (a + b) 14	ı	đ	•	ı	5	e.		١	,	'
13. Firm energy requirement on Province (11 + 12) 1,037	1,859	2,180	2,424	2,760	3,161	3,484	3,778	4,125	4,508	4,923

Columbia
British C
E I
Summary
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CABLE

1,614 1,866 2,187 2,356 2,524 2,659 1,614 1,866 2,187 2,356 2,524 2,659 1,33 1,53 2,067 2,346 2,564 2,874 3,025 1,730 2,067 2,346 2,564 2,874 3,025 1,730 2,067 2,346 2,564 2,874 3,025 1,386 1,724 1,821 1,935 1,963 2,123 1,386 1,725 1,821 1,935 1,963 2,123 1,386 1,725 1,821 1,935 1,963 2,123 8,011 9,802 11,445 11,726 12,234 13,130 1,0 10 9,6 6 6 5										PORE	FORECAST	
Net generating capability: Size 1,614 1,866 2,187 2,356 2,534 2,659 1,50		1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
(a) Other provinces (b) Intend States 3. Deliverablity (1 + 2 - 3) 4. Net capability (1 + 2 - 3) 5. Within Province (c) Indicated demand within Province (d) The BENDEY RADIANCE (2 + 6) (e) Indicated firm energy requirement (e) The ENGINE States (f) Indicated firm energy requirement (f) Indicated firm energy requirement (g) Coher province (h) Indicated firm energy requirement (h) Indicated firm energy requirem						Thousa		Owatts				
1. Net generating capability: (4) Note generating capability: (5) Other provinces (6) Other provinces (7) Other provinces (8) Other provinces (8) Other provinces (9) Other provinces (1) Other provinces (1) Other provinces (2) Other provinces (3) Other provinces (4) Other provinces (5) Other provinces (6) Other provinces (7) Other provinces (8) Other provinces (9) Other provinces (1) Other provinces (2) Other provinces (3) Other provinces (4) Other provinces (5) Other provinces (6) Other provinces (7) Other provinces (8) Other provinces (9) Other provinces (1) Other provinces (2) Other provinces (3) Other provinces (4) Other provinces (5) Other provinces (6) Other provinces (7) Other provinces (8) Other provinces (9) Other provinces (9) Other provinces (1) Other provinces (2) Other provinces (3) Other provinces (4) Other provinces (5) Other provinces (6) Other provinces (7) Other provinces (8) Other provinces (9) Other provinces (1) Other provinces (2) Other provinces (3) Other provinces (4) Other provinces (5) Other provinces (6) Other provinces (7) Other provinces (8) Other provinces (9) Other provinces (1) Other provinces (2) Other provinces (3) Other provinces (4) Other provinces (5) Other provinces (6) Other provinces (7) Other provinces (8) Other provinces (9) Other provinces (9) Other provinces (1) Other provinces (1) Other provinces (2) Other provinces (3) Other provinces (4) Other provinces (5) Other provinces (6) Other provinces (7) Other provinces (8) Other provinces (9) Other provinces (1) Other provinces (1) Other provinces (2) Other provinces (3) Other provinces (4) Other provinces (5) Other provinces (6) Other provinces (7) Other provinces (8) Othe	CAPABILITY:											
(a) Other provinces (b) United States (c) Other provinces (c) Other provinces (d) Other provinces (e) Other provinces (e) Other provinces (f) Other provinces (g) Other p												
2. Receipts of firm power from: (4) Other provinces (5) United States 4. Met capability (1 + 2 - 3) 5. Deliverine firm power to: (5) United States 4. Met capability (1 + 2 - 3) 5. Within Province 6. Indicated demand within Province (3 + 6) 7. Indicated demand within Province (4 - 7) 8. Difference (4 - 7) 8. Difference (4 - 7) 9. Firm senergy requirement within Province (4 + 522 + 524 + 542 + 525 + 629 + 911 + 902 + 912	(a) Hydro (b) Thermal	852 96	1,614	1,866	2,187	2,356	2,524	2,659	2,659	2,660	2,750 689	2,769
(a) Other provinces (b) United States (c) Other provinces (c) Other provinces (d) Other provinces (e) Other provinces (f) Other provinces (g) Othe												
3. Deliveries of firm power to: (a) Other provinces (b) United States 4. Net capability (1 + 2 - 3) 4. Net capability (1 + 2 - 3) 5. Within Province 6. Indicated demand within Province (5 + 6) 7. Indicated demand within Province (6 + 7) 8. Indicated demand within Province (7 + 7) 7. Indicated demand within Province (7 + 7) 8. Indicated demand within Province (8 + 6) 7. Indicated demand within Province (8 + 6) 7. Indicated demand within Province (8 + 6) 7. Indicated demand within Province (9 + 6) 7. Indicated demand within Province (9 + 6) 7. Indicated demand within Province (9 + 91) 7. Indicated demand within P	(a) Other provinces (b) United States	co i	en i	52	1 1	1 1	1 1	1 (f 1	t 1	1 1	1 1
4. Net capability (1 + 2 - 3) 4. Net capability (1 + 2 - 3) 921 1,730 2,067 2,346 2,564 3,025 FIRM FOWER PEAK LOAD: 5. Within Province 6. Indicated demand within Province (5 + 6) 7. Indicated shortage 8. Difference (4 - 7) 9. Firm energy requirement within Province 10. Indicated shortage 11. Indicated shortage 12. Deliveries of firm energy requirement (a) Other provinces (9 + 10) 12. Deliveries of firm energy to: (b) United States (c) Total (a + b) 12. Deliveries (a + b) 13. Deliveries (a + b) 14. States (c) Total (a + b)	Deliveries of firm power											
4. Net capability (1 + 2 - 3) 4. Net capability (1 + 2 - 3) FIRN POWER PEAK LOAD: 5. Within Province 6. Indicated demand within Province (5 + 6) 7. Indicated demand within Province (4 - 7) 8. Difference (5 + 6) 7. Indicated demand within Province 7. The anergy requirement within Province (9 + 10) 7. Indicated firm energy requirement 7. The anergy requirement within Province (9 + 10) 7. Indicated demand within Province (9 + 10) 7. Indicated states 7. The anergy requirement 7. The anergy requirement within Province (9 + 10) 7. Indicated demand within Province (9 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 1	(a) Other provinces (b) United States	30	20	4 1	4 1	7 -	_ا ا	€7 +	e 1	KA I	7	6 1
5. Within Province 6. Indicated demand within Province (5 + 6) 7. Indicated demand within Province (6 + 10) 7. Indicated demand within Province (7 + 10) 7. Indicated demand within Province (10 + 10) 7. Indicated demand w	Net capability (1 + 2	921	1,730	2,067	2,346	2,564	2,874	3,025	3,033	3, 333	3,432	3,604
S. Within Province 6. Indicated shortage 7. Indicated demand within Province (5 + 6) 8. Difference (4 - 7) 8. Difference (4 - 7) 8. Difference (4 - 7) 9. Firm energy requirement within Province 10. Indicated shortage 11. Indicated firm energy requirement 4,523 8,011 9,802 11,445 11,726 12,234 13,130 11 12. Deliveries of firm energy to: (a) Other provinces (b) United States (c) Total (a + b) 184 132 10 9 6 6 6 5					ACTUAL					FORECAST	CAST	
5. Within Province 6. Indicated shortage 7. Indicated shortage 7. Indicated demand within Province (5 + 6) 7. Indicated demand within Province (5 + 6) 7. Indicated demand within Province (6 + 7) 8. Difference (4 - 7) 8. Difference (4 - 7) 9. Firm energy requirement within Province 10. Indicated shortage 11. Indicated shortage 11. Indicated shortage 12. Deliveries of firm energy requirement (4,523 8,011 9,802 11,445 11,726 12,234 13,130 11 12. Deliveries of firm energy to: (a) Other provinces (b) United States (c) Total (a + b) 184 132 10 9 6 6 6 5	FIRM POWER PEAK LOAD:											
7. Indicated demand within Province (5 + 6) 7. Indicated demand within Province (5 + 6) 7. Indicated demand within Province (5 + 6) 8. Difference (4 - 7) 8. Difference (4 - 7) 9. Firm energy requirement within Province 10. Indicated firm energy requirement 11. Indicated firm energy requirement 12. Deliveries of firm energy to: (a) Other provinces (b) United States (c) Total (a + b) 12. Indicated shortage (c) Total (a + b) 13. Indicated shortage 14. S23 8,011 9,802 11,445 11,726 12,234 13,130 11 4,523 8,011 9,802 11,445 11,726 12,234 13,130 11 12. Deliveries of firm energy to: (a) Other provinces (b) United States (c) Total (a + b) 184 132 10 9 6 6 6 5 5		799	1,386	1,724	1,821	1,935	1,963	2,123	2,303	2,418	2,586	2,724
7. Indicated demand within Province (5 + 6) 799 1,386 1,725 1,821 1,935 1,963 2,123 8. Difference (4 - 7)		1	1	1	ě	1	,	t	1	1	•	1
8. Difference (4 - 7)	Indicated demand within Province (5	799	1,386	1,725	1,821	1,935	1,963	2,123	2,303	2,418	2,586	2,724
9. Firm energy requirement within Province 10. Indicated shortage 11. Indicated firm energy requirement 12. Deliveries of firm energy to: (a) Other provinces (b) United States (c) Total (a + b) PILL ENERGY REQUIREMENT: ### 132 10 9 6 6 5 5	3				H		1	13		1 015	7/0	000
rement within Province .4,523 8,011 9,802 11,445 11,726 12,234 13,130 ergy requirement 4,523 8,011 9,802 11,459 11,726 12,234 13,130 m energy to:		li .			В	Millions) t	tt-hours	II.	1	-	H
Firm energy requirement within Province Indicated shortage Indicated firm energy requirement Within Province (9 + 10) Deliveries of firm energy to: (a) Other provinces (b) United States (c) Total (a + b) Firm energy requirement within Province 14	FIRM ENERGY REQUIREMENT:											
Indicated shortage 14		. 4,523	8,011	9,802	11,445	11,726	12,234	13,130	14,029	14,695	15,729	16,494
Indicated firm energy requirement 4,523 8,011 9,802 11,459 11,726 12,234 13,130 14,02 Deliverles of firm energy to: (a) Other provinces (b) United States (c) Total (a + b) 184 132 10 9 6 6 5 5		1	1	1	14	,		ı	ı	ı	ŧ	•
Deliveries of firm energy to: (a) Other provinces (b) United States (c) Total (a + b) (a) Deliveries of firm energy to: - 10 10 9 6 6 3 - 2 184 132 10 9 6 6 5		4,523	8,011	9,802	11,459	11,726	12,234	13,130	14,029	14,695	15,729	16,494
184 132 10 9 6 6 5 5 184 132 10 9 6 6 5 5	Deliveries of firm energy											
184 132 10 9 6 6 5	(a) Other provinces (b) United States	184	10	10	о і	9 1	9 1	2 3	m 0	6 4	m 74	7
	(c) Total (a + b)	184	132	10	6	9	9	5	5	5	5	9
8,143 9,812 11,468 11,732 12,240 13,135		4,707	8,143	9,812	11,468	11,732	12,240	13,135	14,034	14,700	15,734	16,500

TABLE 1. Summary . Yukon and Northwest Territories

									FORECAST	ST	
	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
					Thousan	Thousands of kilowatts	watts				
CAPABILITY:											
1. Net generating capability:											
(a) Hydro (b) Thermal	21	22 -	22	25	37	37	44	44	44	44	44
2. Receipts of firm power from:											
(a) Other provinces (b) United States	1 1	1 1	1 1	1 (1 1	1 1		1 1	t I	1 1	1 1
3. Deliveries of firm power to:											
(a) Other provinces(b) United States	F - F	t I	1 (4 4	1 1			f 1	1 (1 1	ı t
4. Net capability (1 + 2 - 3)	21	22	23	26	40	41	55	55	56	57	57
				ACTUAL					FORECAST	IST	
FIRM POWER PEAK LOAD:											
5. Within Province	14	19	19	19	30	31	34	39	43	777	45
6. Indicated shortage	1	ı	3		1	,	,	(ı	-	,
7. Indicated demand within Province (5 + 6)	14	19	19	19	30	31	34	39	43	44	45
INDICATED RESERVE: 8. Difference (4 - 7)	+ 7	+ 3	+ 4	+ 7	+ 10	+ 10	+ 21	+ 16	+ 13	+ 13	+ 12
					Millions of	of kilowat	kilowatt-hours				
FIRM ENERGY REQUIREMENT: 9. Firm energy requirement within Province	67	96	98	115	131	157	160	191	197	202	204
10. Indicated shortage	,	ı		,	ı	t	1	1	ı	,	,
 Indicated firm energy requirement within Province (9 + 10) 	67	96	86	115	131	157	160	191	197	202	204
12. Deliveries of firm energy to:						the state of the s					
(a) Other provinces (b) United States	1 1	1 1			1 t		1 1	1 1		1 1	1 1
(c) Total (a + b)	ı	t	I	1		t		t	ı	,	
13. Firm energy requirement on Province (11 + 12)	67	96	86	115	131	157	160	191	197	202	204

TABLE 2. Net Generating Capability Within Provinces(1)

									FORE	CAST		PERC	PERCENTAGE CHANGE	ANGE
PROVINCE	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1956	1960	1956
					Thousands	ds of kilowatts	owatts							
Newfoundland (including Labrador)	188	223	242	249	271	267	309	313	408	412	412	27.7	33.3	70.2
Prince Edward Island	10	18	18	25	26	25	38	38	30	55	55	111.0	44.7	206.0
Nova Scotia	209	384	378	415	411	493	667	508	508	508	522	32.0	9.4	38.1
New Brunswick	192	256	286	321	372	373	388	429	694	697	569	35.7	46.7	0.66
Quebec	4,417	5,619	5,890	6,461	7,053	7,681	8,764	8,784	8,927	9,422	9,422	48.8	7.5	0.09
Ontario	2,566	4,488	4,565	4,932	5,881	6,275	6,650	7,242	7,540	8,080	8,376	45.7	26.0	83.5
Manitoba	428	593	602	639	734	734	932	1,029	1,029	1,029	1,134	54.8	21.7	88.4
Saskatchewan	214	339	402	463	538	671	752	756	756	886	987	87.1	31.3	145.5
Alberta	191	458	558	5888	734	768	925	973	1,127	1,196	1,383	65.8	49.5	147.8
British Columbia	876	1,747	2,019	2,350	2,568	2,877	3,028	3,036	3,338	3,439	3,613	50.0	19.3	78.9
Yukon and N.W.T.	21	22	23	26	40	41	55	55	99	57	57	139.1	3.6	147.8
CANADA	9,384	14,147	14,983	16,469	18,628	20,205	22,340	23,163	24,196	25,553	26,530	49.1	18.8	77.1
(1) Hydro plus thermal (Table I, i	I, item 1 a +	a + 1 b).												

TABLE 3. Firm Power Peak Load Within Provinces(1)

									FORE	CAST		PERC	PERCENTAGE CHANGE	ANGE
PROVINCE	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1956	1960	1956
					Thousands	Jo	kilowatts							
Newfoundland (including Labrador)	177	206	222	222	231	231	245	251	324	332	342	10.4	39.6	54.1
Prince Edward Island	∞	12	12	174	16	19	21	24	27	31	34	75.0	61.9	183.3
Nova Scotia	163	278	301	322	335	330	356	375	386	411	434	18.3	21.9	44.2
New Brunswick	177	235	243	258	273	291	319	347	371	398	454	31.3	32.9	74.5
Quebec	3,174	4,367	6,749	5,256	5,375	5,466	5,871	6,103	6,521	6,911	7,353	23.6	25.2	54.8
Ontario	3,078	4,757	5,064	5,369	5,794	6,154	6,391	069,690	7,166	7,533	7,939	26.2	24.2	56.8
Manitoba	419	594	605	809	979	069	772	898	576	686	1,029	27.6	33.3	70.1
Saskatchewan	128	227	278	299	353	377	418	470	517	567	621	50.4	48.6	123.4
Alberta	176	391	451	476	580	679	714	792	870	955	1,044	58.3	46.2	131.5
British Columbia	799	1,386	1,724	1,821	1,935	1,963	2,123	2,303	2,418	2,586	2,724	23.1	28.3	58.0
Yukon and N.W.T.	14	19	19	19	30	31	34	39	43	777	45	78.9	32.4	136.8
CANADA	8,313	12,472	13,668	14,664	15,568	16,201	17,264	18,292	19,587	20,757	21,989	26.3	27.4	6.09

(1) Indicated Firm Demand (Table I, item 7).

TABLE 4. Indicated Firm Energy Requirement Within Provinces(1)

									FORE	CAST		PERC	PERCENTAGE CHANGE	ANGE
PROVINCE	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1956	1960	1956
					Millions	of Kilowa	Kilowatt Hours							
Newfoundland (including Labrador)	1,058	1,299	1,374	1,333	1,320	1,369	1,429	1,462	1,674	1,715	1,788	4.0	25.1	30.1
Prince Edward Island	31	51	53	09	69	81	85	06	86	108	118	4.09	38.8	122.6
Nova Scotia	874	1,340	1,464	1,447	1,551	1,634	1,707	1,828	1,923	2,027	2,137	16.6	25.2	797
New Brunswick	970	1,248	1,275	1,347	1,402	1,523	1,667	1,888	2,014	2,182	2,292	30.7	37.5	79.8
Quebec	20,565	29,841	31,877	31,112	31,763	33,303	38,323	39,958	42,932	45,874	49,048	20.2	28.0	53.9
Ontario	18,271	26,382	28,875	30,768	31,401	34,844	36,216	37,700	40,423	42,383	44,750	25.4	23.6	55.0
Manitoba	2,218	3,122	3,414	3,435	3,557	3,828	4,086	5,026	5,325	5,607	5,908	19.7	9.44	73.1
Saskatchewan	405	877	1,047	1,276	1,422	1,527	1,698	1,915	2,116	2,353	2,594	62.2	52.8	147.8
Alberta	1,023	1,859	2,180	2,424	2,760	3,156	3,481	3,778	4,125	4,508	4,923	59.7	41.4	125.8
British Columbia	4,523	8,011	9,802	11,459	11,726	12,234	13,130	14,029	14,695	15,729	16,494	34.0	25.6	68,3
Yukon and N.W.T.	67	96	98	115	131	157	160	191	197	202	707	63.3	27.5	108.2
CANADA	50,005.	74,126	81,459	84,776	87,102	93,656	101,928	107,865	115,522	122,688	130,256	25.1	27.8	59.9
(1) Taklo T (***********************************														

⁽¹⁾ Table I, item 11.

TABLE 5. Indicated Reserve(1)

									F O R E	CAST		PERCE	PERCENTAGE CHANGE	GE
PROVINCE	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1956	1960	1956-
					Thousands	of	Kilowatts							
Newfoundland (including Labrador) 1. Gross capability 2. Total firm demand on the province	188	223	242	249	271 239	267	309	313	408	412 345	412 355	27.7	33.3	70.2
 Indicated reserve (1 - 2) Indicated reserve expressed as a % of total firm demand 	5.2	16	12 5.2	21	32	29	50	49	71 21.1	67	57	: :	: :	: :
Prince Edward Island 1. Gross capability 2. Total firm demand on the province	10	18	18	25 14	26 16	25	38	38	38	31	34	111.1	44.7	205.6
 Indicated reserve (1 - 2) Indicated reserve expressed as a % of total firm demand 	2 25.0	6 50.0	50.0	11 78.6	10	31.6	17	14 58.3	11 40.7	24	21	: :	: :	: :
Nova Scotia 1. Gross capability 2. Total firm demand on the province	209	384	378	415	411	493	359	508	508 386	508	522	32.0 18.5	4.6	38.1
 Indicated reserve (1 - 2) Indicated reserve expressed as a % of total firm demand 	40	104	75	91 28.1	73	160	140	130	31.6	97	88 20.3	: :	: :	: :
New Brunswick 1. Gross capability 2. Total firm demand on the province	194	260	291 248	326 266	380	380	395 342	436	474	474	574	35.7	45.3	97.3
 Indicated reserve (1 - 2) Indicated reserve expressed as a % of total firm demand 	12 6.6	19	43	60	98	80	53	67	81 20.6	55	109	: :	: :	: :

See footnotes at end of table.

TABLE 5. Indicated Reserve(1) - Continued

									FORE	CAST		PERC	PERCENTAGE CHANGE	NGE
PROVINC M	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1956	1960	1956
					Thousands	of	Kilowatts							
Quebec 1. Gross capability 2. Total firm demand on the province	4,418	5,625	5,901	6,468	7,062 6,105	7,690	8,780	8,799	8,942	9,437	9,437	48.8	7.5	59.9
3. Indicated reserve $(1-2)$ 4. Indicated reserve expressed as a $\%$ of total firm demand	456	429	361	460	957	1,471	2,154	1,940	1,661	1,762	1,320	: :		
Ontario 1. Gross capability 2. Total firm demand on the province	3,307	5,229	5,267 5,151	5,637	6,549	6,967	7,344	7,938	8,239	8,782	9,079	39.4 25.8	23.6 23.3	72.4
3. Indicated reserve (1 - 2) 4. Indicated reserve expressed as a % of total firm demand	- 70	368	116	181	668	725	865	1,156	1,026	1,200	1,093	: :		0 0 0 0
Manitoba 1. Gross capability 2. Total firm demand on the province	428	672	666	708	802	908	1,018	1,115	1,116	1,166	1,221	52.9 12.5	19.9 33.3	83.3
 Indicated reserve (1 - 2) Indicated reserve expressed as a % of total firm demand 	.68	64	47	86 13.8	156	116	246	217	172	177	192		: :	: :
Saskatchewan 1. Gross capability 2. Total firm demand on the province	214	339	402	463	539	672	753	756 556	756	886	987	87.3	31.1	145.5
 Indicated reserve (1 - 2) Indicated reserve expressed as a 7, of total firm demand 	18	33	60	95	118	223	249	36.0	152	182	279	• • •		

See footnotes at end of table.

TABLE 5. Indicated Reserve(1) - Concluded

										FORE	CAST		PERCENTAGE		CHANGE
PROVINCE	194	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1956 1960	1960	195 6 1964
						Thousands	Jo	Kilowatts							
Alberta 1. Gross capability 2. Total firm demand on the pro-	province 17	191 179	394	562	592	738	771	928	976	1,132	1,203	1,392	65.1	50.0	147.7
3. Indicated reserve (1 = 2) 4. Indicated reserve expressed	28.82	12	\$	111	116	157	121	213	184	262	248	348	:		:
of total firm demand	2	6.7	16.2	24.6	24.4	27.0	18.6	29.8	23.2	13.0	26.0	33.3	:	:	
British Columbia															
1. Gross capability 2. Total firm demand on the pro-	95 province 82	951	1,750	2,071	2,350 1,825	2,568	2,877	3,028	3,036	3,338	3,439	3,613	46.2	19.3	74.5
3. Indicated reserve (1 - 2)	8	122	344	342	525	629	911	905	730	915	846	880	:	:	:
indicated teserve expressed of total firm demand	14.7	.7	24.5	19.8	28.8	32.4	46.3	42.4	31.7	37.8	32.6	32.2	:	:	:
Yukon and N.W.T.															
1. Gross capability 2. Total firm demand on the prov	province 1	21	22	23	26	30	31	34	39	56	57 444	57	139.1 78.9	3.6	147.8
3. Indicated reserve (1 = 2)		7	т	77	7	10	10	21	16	13	13	12	:		:
of total firm demand	50.0	0.	15.8	21.1	36.8	33.3	32.2	61.8	41.0	30.2	29.5	26.7	:		0 8
CANADA															
1. Gross capability 2. Total firm demand on Canada	9,384		14,152 12,702	15,039	16,469 14,816	18,628	20,205	22,340 17,430	23,163	24,196	25,553	26,530 22,111	48.5	18.8	76.4
3. Indicated reserve (1 = 2)	67	678	1,450	1,177	1,653	2,908	3,852	4,910	4,703	4,436	4,671	4,419	:	:	:
of total firm demand	2	7.8	11.4	8.5	11.2	18.5	23.5	28.2	25.5	22.4	22.4	20.0	:	:	:
															1

(1) Gross capability (Table 1, item 1 + 2) less total firm demand on the provinces (Table 1, item 7 + 3). ... Pigures not appropriate or not applicable.

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The Policy Sub-Committee serves as an over-all co-ordinating agency for these surveys, the connecting link between the Dominion Bureau of Statistics, The Canadian Electrical Association and the interests of the electric power utility industry-at-large.

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DOMINION BUREAU OF STATISTICS

Public Finance and Transportation Division
Public Utilities Section

Eighth ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

1961 **A**ctual 1962 - 1965 **F**orecast

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TABLE OF CONTENTS

		Page
Ir	troduction	5
Re	eview of Survey Results	6
	<u>CHARTS</u>	
	Not Compared to a 1414	
Α.	Net Generating Capability within Canada This chart graphically portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important.	8
В.	Net Capability and Firm Demand within Canada	9
c.	Net Generating Capability within Provinces This chart illustrates the growth in capability and the comparative importance of hydro and thermal generation within provinces.	10
D.	Net Capability and Firm Demand within Provinces	12
Ε.	Firm Energy Requirement within Canada This chart shows the growth in Canadian firm energy requirement during the period 1950-1965.	14
	TABLES	
1A	Capability and Firm Power Peak Load Requirements This table summarizes capability, firm power peak load and indicated reserve for Canada and for each of the provinces.	15
1B	Energy Supply and Requirements This table summarizes current and historical data on generation, interprovincial receipts and deliveries, secondary energy, and firm energy requirements.	27
2.	Total Net Generating Capability within Provinces	39
3.	Firm Power Peak Load within Provinces	40
÷.	This table compares rates of growth of firm energy requirement within provinces.	41
5.	Indicated Reserve	42
510	ossary of Terms	45
lar	nadian Electrical Association Electric Power Statistics Committee	46

SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:

- .. Figures not available.
- ... Figures not appropriate or not applicable.
 - Nil or zero.

Introduction

This report presents the results of the Eighth Annual Electric Power Survey of Capability and Load which was conducted in March 1962. The survey covers all producers of electric energy in Canada which generate 10 million kwh. or more per annum. This report, therefore, covers the same group of companies which provide the statistics for the monthly "Electric Power Statistics" report (catalogue No. 57-001).

There are approximately 150 responding companies in the group, about half of which are utilities and half industrial establishments. The combined group accounts for 99.3 per cent of all generation, all the imports and exports. The utilities group contributes 79 per cent of the generation to the Canada total.

This year's report is the first incorporating the results obtained by the use of a revised reporting form. As a consequence, several revisions are incorporated into the report and historical figures adjusted where necessary. The revised report is organized in such a manner that there is a direct comparison and link with the monthly "Electric Power Statistics" in that the generation figures are common to the two publications; any differences are due to late revisions.

The survey is carried out in co-operation with the Canadian Electrical Association. Area representatives of the Association collect and edit the returns which are forwarded to the Dominion Bureau of Statistics for final revision, editing and compilation. A Co-ordinating Panel composed of members of the Canadian Electrical Association and the Dominion Bureau of Statistics review the results immediately prior to publication. The assistance received from the Canadian Electrical Association and its members has been invaluable in making possible the early release of the survey data.

Concepts and Definitions

Table 1A. Capability and Firm Power Peak Load Requirements:

The generating capability and firm power peak load concepts are virtually unchanged from previous reports. However, more detail has been provided in the generating capability which is now proken down to identify conventional steam, nuclear steam, internal combustion, and gas turbine equipment. Generating capability measures the expected power of all available generating facilities of the province (or nation) at the time of one-hour firm peak load for each of the respondents. This may be equal to, or smaller than, the generating capacity as measured by the name plate rating of the equipment and published in the "Prime Mover and Electric Generating Equipment" report.

The variations between generating capability and generating capacity may be caused by high ater in reservoirs resulting in a higher water head and greater generation than the name plate caacity; the impossibility of placing all pieces of equipment on the line at the same time, low water, ce, or some equipment being considered unreliable, thereby resulting in generation below capacity.

All figures in Table 1A of the report are calculated at the time of the one-hour peak load for ach of the respondents. As a result, capability and peak loads are non-coincident (the arithmetic um of the actual peak loads regardless of time of occurrence) and may be equal to, or smaller than, he coincident peak load for each of the provinces. Insofar as the utilities have about 80 per cent f the load of the nation and most of the peak loads occur in December, the variation from the coincident peak will not be too great. Two major systems which account for almost 40 per cent of the apability have only a slight variation between their coincident and non-coincident peak loads. Of hirty-six major systems serving the larger population centres in Canada, nine had peak loads on ecember 18, five on December 19, 12 on other dates between November 30 and December 30, eight outside his period, and two did not report.

Receipts and deliveries of firm power used in calculating net capability are the interprovincial and international transfers of power under firm contracts, or the best estimate of firm obligations possible in the absence of contracts. The actual receipts and deliveries of firm and secondary power are taken into account in the calculation of firm power peak loads.

Peak loads are the total demands within a province after all inter-changes have been taken into account to remove any duplication. The peak loads include all electricity consumed by ultimate customers, line losses, and manufacturing plants own consumption, but do not include generating station service which is deducted before arriving at generating capability. Firm power peak loads exclude the secondary or surplus energy used by ultimate customers on an interruptible basis, as these are not firm obligations.

Indicated shortages are a measure of the firm power commitments that a system was not able to meet at the time of its peak load.

The indicated power reserve of a province (shown in table 1) is the reserve after all firm obligations and shortages have been met or received. It is the difference between net capability and total firm peak load within the province or gross capability less firm power peak load on the province, and is a measure of the industries' ability to satisfy demands of a province and meet contingencies. Since not all systems are fully interconnected, the reserves of power shown cannot always be fully utilized.

Table 1B. Energy Supply and Requirements:

Net generation figures which are identical with the figures presented in the monthly "Electric Power Statistics" report (or revisions thereof) are exclusive of station service and, for 1961, are subdivided by type of generation. No forecasts of generation are given for 1962-65.

Although complete historical figures are not currently available, it is expected that they will be included in future reports.

Firm energy receipts and deliveries are the actual receipts and deliveries under firm contracts or obligations.

Secondary energy delivered within the province is the surplus energy sold at time of low demand and when surplus generating capability is available. This energy may be interrupted at any time and, consequently, sells at very low rates, generally for use in electric boilers.

Firm energy available is the measure of primary demands of electric energy, including residential, commercial and power sales, and all line losses after deducting net exports. It is an important economic indicator and, as such, is of major importance in forecasting.

Indicated shortage is an estimate of the total quantity of energy a system was unable to deliver due to its inability to meet firm power commitments during the year; no shortages have occurred since 1957.

Firm energy requirements are a measure of the needs for electric energy that have been or can be met (firm energy available) and those that cannot be serviced (shortage).

Review of Survey Results

Total net generating capability in 1961 for companies which generate over 10 million kwh. per year increased only 248,000 kw. or 1.1 per cent to 22,628,000 kw.; this is the smallest increase in recent years. The forecast years 1961-1965 indicate a growth of 5,685,000 kw. or a compound growth

rate of 5.76 per cent, as compared with the previous ten-year period 1951-1960, when the growth rate was 9.2 per cent. Thermal capability is expected to grow at the rate of 14.5 per cent per year in the forecast period compared to 17.1 per cent in the previous ten-year period, while hydro-electric capacity is expected to increase at 3.3 per cent per year compared to 8.0 per cent in the previous ten years. Most of the thermal increase will be in steam plants, a small growth in gas turbines, while internal combustion plants will be virtually unchanged.

The first nuclear capability is forecast for 1965, although this may be postponed due to delays in construction or bringing the plant on line because of its pioneering nature. The nuclear capability does not include the 20,000 kw. plant at Rolphton, Ontario which is an experimental plant and not considered part of capability.

The 1961 forecast of generating capability was 367,000 kw. higher than that actually obtained, indicating a delay in completing some plants till the period 1962-1964 and 65,000 kw. thermal capacity out of service at the time of the 1961 survey.

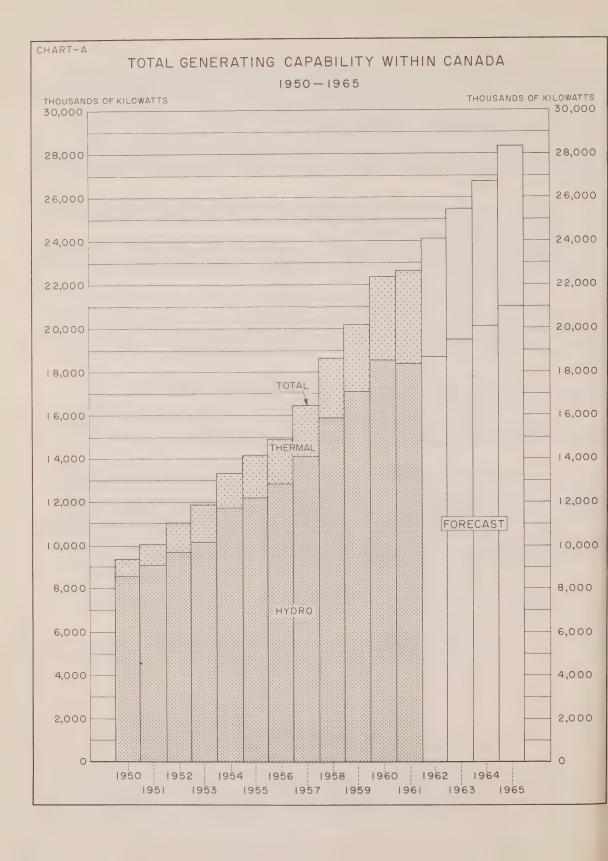
The forecast for 1961 generating capability was approximately realized in all provinces except Ontario, Manitoba and Alberta which were significantly under the forecast and in British Columbia which exceeded the forecast.

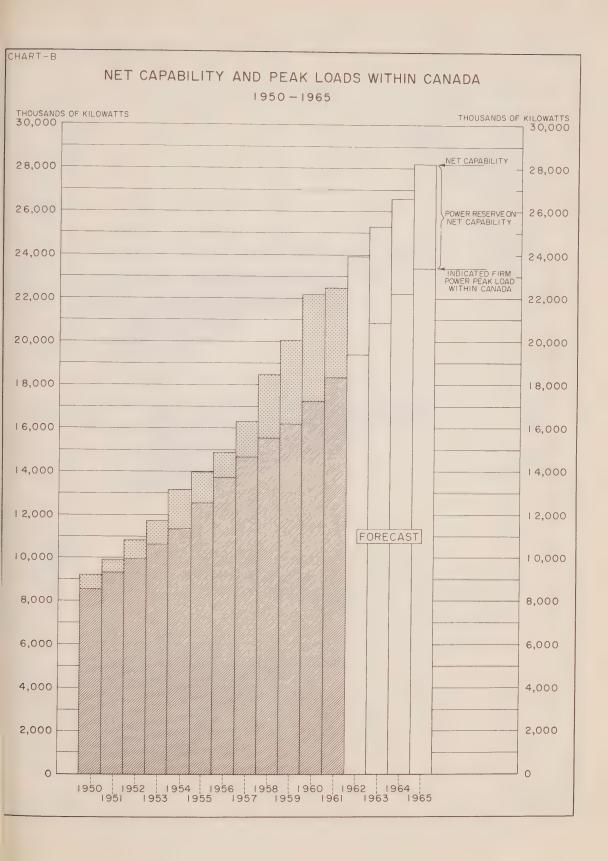
The largest absolute growth in generating capability for the forecast years is indicated for Ontario - 2,135,000 kw., Quebec - 1,616,000 kw., British Columbia - 582,000 kw. and Alberta - 451,000 kw. Whereas Quebec will meet most of the increased generating capability by adding over 1,300,000 kw. in hydro capability and 200,000 thermal capability, Ontario plans to increase its capability by adding 1,750,000 thermal, including 200,000 nuclear and only 385,000 hydro; British Columbia plans to add 466,000 thermal and only 110,000 hydro.

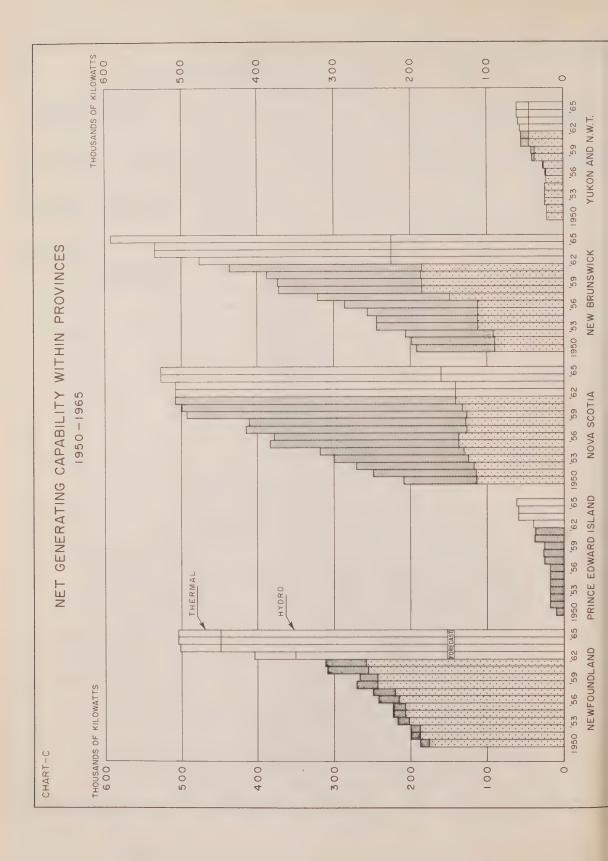
The firm power peak loads have not shown the same change in rate of growth as generating capability. In the 1950's the growth rate of firm power peak load in Canada was 7.5 per cent, while the forecast rate of growth is 6.2 per cent.

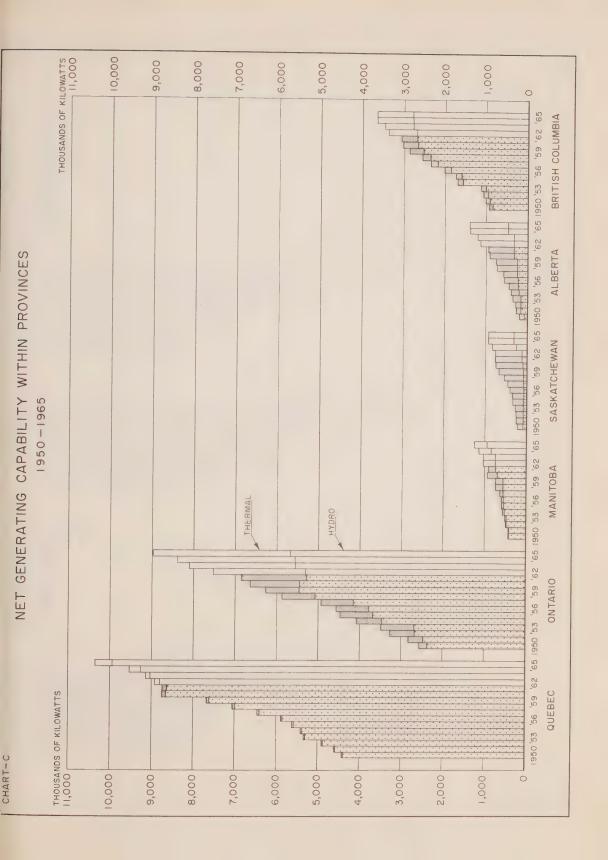
As a result, the indicated reserve is expected to amount to 4,551,000 kw. in 1962, will decline in 1963 and 1964, and rise to 4,780,000 kw. in 1965, while the indicated reserve is forecast to decline to 15.2 per cent in 1964 and rise in 1965 to 20.3 per cent.

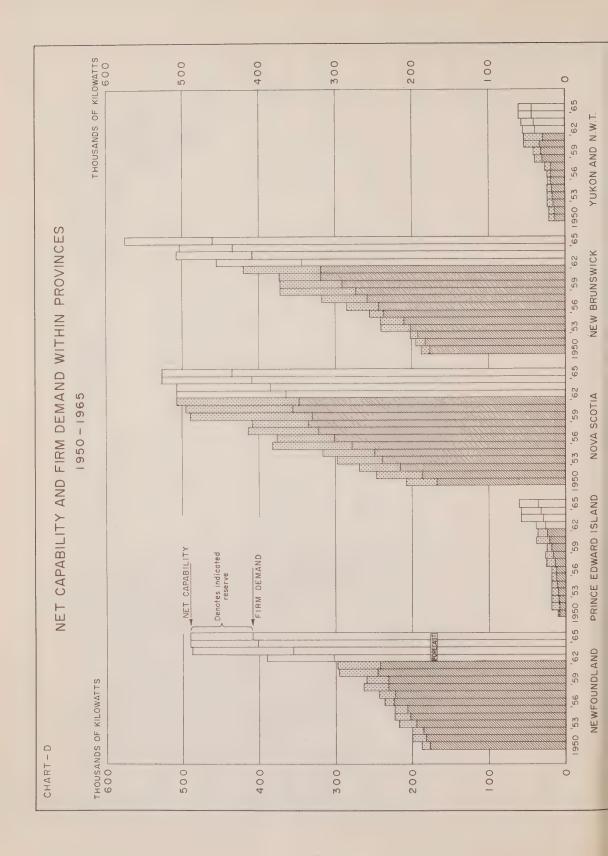
Firm energy requirements increased 2.7 per cent for 1961 to 105,076,000,000 kwh. compared to growth of 7.3 per cent in the previous 10 year period and a forecast growth rate of 6.6 per cent for the period 1961-1965. All provinces but British Columbia shared in the current increase. The forecast or firm energy requirements made last year was some 2,500 million kwh. higher than what was actually ttained. At the same time firm energy requirements were increasing, there was a reduction in the evel of net exports (exports-imports) to the United States and lower deliveries of secondary energy. his combined with a long shutdown of the Kitimat Plant of Aluminum Company of Canada Limited in ritish Columbia, and changed hydraulic conditions in certain parts of the country caused a slight eduction in net generation to 113,271,000,000 kilowatt hours - the first decline since 1947.

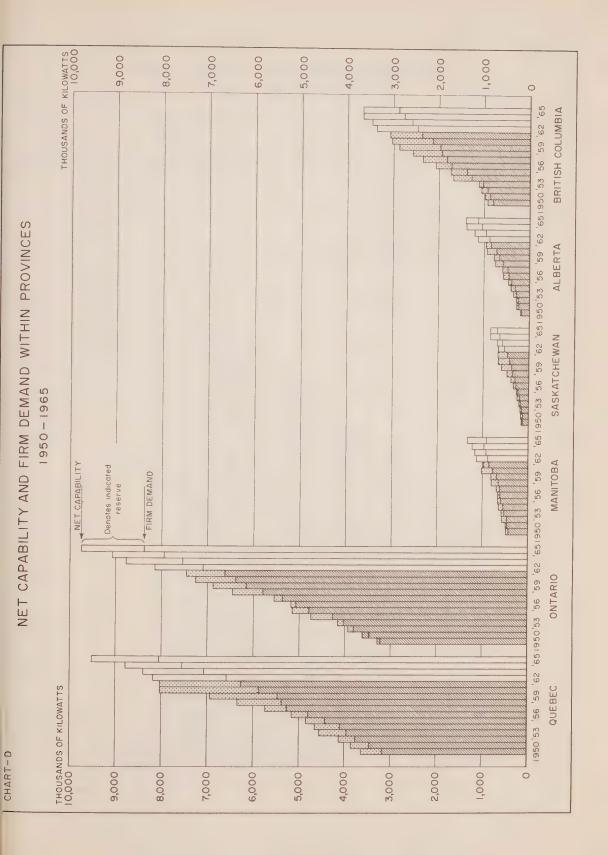












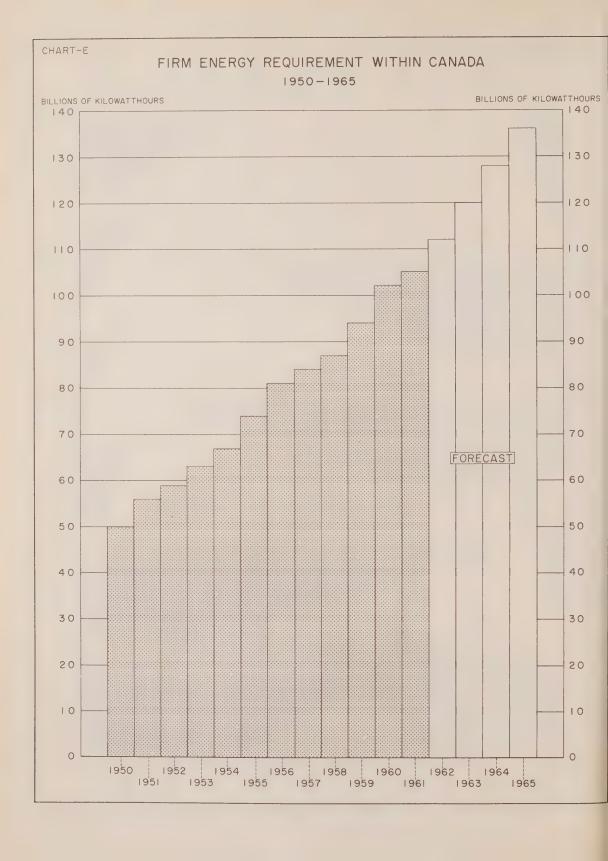


TABLE 1A. Capability and Firm Power Peak Load Requirements

Canada Total

F. 00 60

10. 11. 12.

13.

				Actual					Fore	Forecast	
	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
Canahilitv					thousands	ds of kilowatts	watts				
Net generating capability:											
Hydro-electric Steam - Conventional	9,044	12,841	14,143	15,912	17,086	18,516	18,389	18,728	19,526	20,121	21,013
Internal combustion () Gas turbine ()	1,032	2,142	2,326	2,716	3,119	3,824	240 351	240	243	249	200
Total net generating capability	10,076	14,983	16,469	18,628	20,205	22,340	22,628	24,218	25,445	26,716	28,313
Receipts of firm power from: Other provinces United States	• t		: 1	: 1	: '	: 1	: 5				: "
Total receipts	1	56	1	1		ı	2	2		n -	m m
Deliveries of firm power to:											
Other provinces	175	147	150	152	152	166	146	176	131	135	121
Total deliveries	175	147	150	152	152	166	146	176	131	135	121
Total net capability (6 + 9 - 12)	9,901	14,892	16,319	18,476	20,053	22,174	22,484	24,044	25,317	26,584	28,195
Peak loads:											
Firm power peak load within CanadaIndicated shortages	8,989	13,668	14,664	15,568	16,201	17,264	18,353	19,493	20,871	22,188	23,415
Total indicated firm power peak load within Canada (14 + 15)	9,310	13,715	14,666	15,568	16,201	17,264	18,353	19,493	20,871	22, 188	23,415
Fixm power peak load on Canada (12 \pm 16)	9,485	13,862	14,816	15,720	16,353	17,430	18,499	19,669	21,002	22,323	23,536
Indicated reserve: Indicated reserve (13 - 16)	591	1,177	1,653	2,908	3,852	4,910	4,131	4,551	4,446	4,396	4,780

14. 15.

17.

18.

Newfoundland

TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

					Actual					Forecast	ast	
		1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
					t)	thousands of	kilowatts					
	Capability:											
	Net generating capability:											
-16"	Hydro-electric Steam - Conventional)	188	215	220	243	243	255	258	350	07 07	448	448
4.0	Internal combustion) Gas turbine	12	27	29	28	24	54	13	14	14	16	16
. 9	Total net generating capability	200	242	249	271	267	309	311	404	502	504	504
	Receipts of firm power from:											
7.8	Other provinces	1 1	1 1	1 (1 1	1 1	1 1	1 1	1 1:	1 1	1 1	
6	Total receipts	ſ	ı	t	1	ι	t	١	ı	t	,	
	Deliveries of firm power to:		:			;						
10.	Other provinces	1 1	9 1	9 ;	∞ ।	7	14	13	14	14	14	14
12.	Total deliveries	•	9	9	∞	7	14	13	14	14	14	14
13.	Total net capability (6 + 9 - 12)	200	236	243	263	260	295	298	390	488	067	769
	Peak Loads:		6	6						1		
14.	Firm power peak load within province Indicated shortages	182	222	222	231	231	245	242	302	355	401	409
16.	Total indicated firm power peak load within province (14 + 15)	182	224	222	231	231	245	242	302	355	401	607
17.	Firm power peak load on province (12 + 16).	182	230	228	239	238	259	255	316	369	415	423
	Indicated reserve:											
18.	Indicated reserve (13 - 16)	18	12	21	32	29	50	56	88	133	89	81

TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

					Actual					Forecast	cast	
		1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
					th	thousands of	f kilowatts					
	Capability:											
	Net generating capability:											
1.3.3.	Hydro-electric Steam - Conventional	1	ı	ŧ	ı		•	32	32	52	- 52	- 25
4.		18	18	25	26	25	38	I 3	- 7	- /		11 0
. 9	Total net generating capability	18	18	25	26	25	38	37	39	59	59	19
	Receipts of firm power from:											
7.8	Other provinces		1 1	1 1	1 1	()				1	1	
9.	Total receipts	,	ı	3			1	1			1	
	Deliveries of firm power to:											
10.	Other provinces United States	()		1 1			1 1	()	ı		ŧ	1
12.	Total deliveries	1	ı	1		,	,	1		,	1 ,	-
13.	Total net capability (6 + 9 - 12)	18	18	25	26	25	38	37	39	59	59	61
	Peak loads:											
14.	Firm power peak load within province	∞ ı	12	14	16	19	21	24	26	29	32	36
16.	Total indicated firm power peak load within province (14 + 15)	œ	12	14	16	19	21	24	26	29	32	36
17.	Firm power peak load on province (12 + 16)	∞	12	14	16	19	21	24	26	29	32	36
18.	Indicated reserve: Indicated reserve (13 - 16)	10	9	11	10	9	17	13	E E	30	27	25

Nova Scotla

TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

NEW DEUNSWICK

					Actual					Fore	Forecast	
		1921	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	Capability:					thousands	ds of kilowatts	watts				
	Net generating capability:											
15.6	Hydro-electric Steam - Conventional	06	112	148	185	185	186	185	225	225	225	225
4.70	Internal combustion) Gas turbine)	108	174	173	187	188	202	1 ∞	1 00	, ∞	. 00	1 00
. 6	Total net generating capability	198	286	321	372	373	388	436	476	534	534	592
	Receipts of firm power from:											
7.	Other provinces	. 2	ا ر	50 +	∞ 1	7	۲ ،	9 1	9 1	~ ~	7.	۲,
9.	Total receipts	2	5	2	80	7	7	9	9	- 80	- 8	- 00
	Deliveries of firm power to:											
10.	Other provinces	- 4	- 5	1 00	10	1 6	. 62	22	1 00	1 9	1 6	4 L
12.	Total deliveries	7	5	00	6	6	23	22	288	35	39	25
13.	Total net capability (6 + 9 - 12)	196	286	318	371	371	372	420	454	507	503	575
H	Peak loads:											
14.	Firm power peak load within provinceIndicated shortages	184	243	258	273	291	319	319	343	807	434	460
16.	Total indicated firm power peak load within province (14 + 15)	184	243	258	273	291	319	319	343	408	734	097
17.	Firm power peak load on province (12 + 16)	188	248	266	282	300	342	341	371	443	473	485
18.	Indicated reserve: Indicated reserve (13 - 16)	12	43	09	80	80	بر در	101	111	66	69	115

TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

					Actual					Forecast	ist.	
		1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
						thousands	s of kilowatts	atts				
	Capability:											
	Net generating capability:											
3.5	Hydro-electric	4,609	5,854	6,406	6,992	7,612	8,658	8,628	8,803	9,028	9,263	9,939
4.	Internal combustion	70	00	cc	10	60		15	15 36	15 36	36	15 36
. 9	Total net generating capability	4,635	5,890	6,461	7,053	7,681	8,764	8,738	8,913	9,138	9,528	10,354
	Receipts of firm power from:											
. %	Other provinces	H 1	7	7	6 1	O 1	1.6	19	19	17 2	16	16
9.	Total receipts	1	11	7	6	6	16	21	21	19	18	18
	Deliveries of firm power to:											
10.	Other provinces	735	691 56	694 56	673 57	696	698	696	699	702 60	703	795
12	Total deliveries	791	747	750	730	753	755	734	758	762	763	855
13.	Total net capability (6 + 9 - 12)	3,845	5,154	5,718	6,332	6,937	8,025	8,025	8,176	8,395	8,783	9,517
	Peak loads:											
14.	Firm power peak load within province	3,462	4,749	5,256	5,375	5,466	5,871	6,258	6,578	7,063	7,530	8,050
16.	Total indicated firm power peak load within province (14 + 15)	3,462	4,793	5,258	5,375	2,466	5,871	6,258	6,578	7,063	7,530	8,050
17.	Firm power peak load on province (12 + 16)	4,253	5,540	6,008	6,105	6,219	6,626	6,992	7,336	7,825	8,293	8,905
	Indicated reserve:											
18.	Indicated reserve (13 - 16)	383	361	760	957	1,471	2,154	1,767	1,598	1,332	1,253	1,467

TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

	1				Actual					Forecast	ast	
		1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
						thousan	thousands of kilowatts	watts				
٥,	Capability:											
	Net generating capability:											
1.	Hydro-electric Steam - Conventional)	2,476	3,778	4,145	5,081	5,467	5,464	5,292	5,306	5,557	5,572	5,682
. 4	Internal combustion	348	787	787	800	808	1,186	1 11	- 11			6
5.	Gas turbine							1		- 1	. 1	1
. 9	Total net generating capability	2,824	4,565	4,932	5,881	6,275	6,650	6,858	7,529	8,102	8,399	8,993
	Receipts of firm power from:											
7.	Other provinces	744	702	705	999	692	769	569	969	869	700	792
9.	Total receipts	744	702	705	899	692	769	695	969	869	700	792
	Deliveries of firm power to:											
10.	Other provinces	85	1 86	1 86	1 86	2 86	2 86	5 86	89	36	36	36
12.	Total deliveries	86	87	87	87	88	88	91	76	42	42	42
13.	Total net capability (6 + 9 - 12)	3,482	5,180	5,550	6,462	6,879	7,256	7,462	8,131	8,758	9,057	9,743
-	Peak loads:											
14.	Firm power peak load within province	3,292	5,064	5,369	5,794	6,154	6,391	6,615	7,091	7,535	7,951	8,380
16.	Total indicated firm power peak load within province (14 + 15)	3,611	5,064	5,369	5,794	6,154	6,391	6,615	7,091	7,535	7,951	8,380
17.	Firm power peak load on province (12 + 16)	3,697	5,151	5,456	5,881	6,242	6,479	6,706	7, 185	7,577	7,993	8,422
18.	Indicated reserve: Indicated reserve (13 - 16)	- 129	116	181	999	725	865	847	1,040	1,223	1,106	1,363

TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

Manitoba

	1965			945 294 -	4 -	1,243		88 1	ω ω) (1	1,331		915	915	915	416
st	1964			840 294	7 1	1,138		88 1	80		1 1	1	1,226		696	696	696	257
Forecast	1963			735 294	4 -	1,033		138	138		, ,	,	1,171		929	929	929	242
	1962			735 294 -	7 -	1,033		88 1	88		1 1	1	1,121		- 889	889	889	232
	1961	tts		735	4 1	905		83	83		1 1	,	988		849	849	849	139
	1960	of kilowatts		701	731	932		86	98		, ,	'	1,018		772	772	772	246
	1959	thousands		566	108	734		72	72		1 1	1	806		069	069	069	116
Actual	1958			566	108	734			89		1 1	•	802		949	979	979	156
7	1957			561	8/	639		69	69		14	14	769		608	809	622	98
	1956			556	40	602		64	79		14	14	652		605	909	619	47
	1951			413	OI	423		77	77		6 -	6	167		454	454	463	37
		Capability:	Net generating capability:	Hydro-electric	Internal combustion	Total net generating capability	Receipts of firm power from:	Other provinces	Total receipts	Deliveries of firm power to:	Other provinces	Total deliveries	Total net capability	Peak Loads:	Firm power peak load within province Indicated shortages	Total indicated firm power peak load within province (14 + 15)	Firm power peak load on province (12 + 16)	Indicated reserve: Indicated reserve (13 - 16)
				2.3.	4.5	. 6		7.	9.		10.	12.	13.		14.	16.	17.	18.

TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

Saskatchewan

					Actual					Forecast	ast	
		1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	Gapability:					thousar	thousands of kilowatts	owatts				
	Net generating capability:											
1. 2. 3.	Hydro-electric	85	82	87	87	80 C 80 00 V	99	107 572	110 572	244 517	311 539	311 539
4.	Internal combustion	001	320	2/0	104	000		35	29 43	29	29 43	29
.9	Total net generating capability	245	402	463	538	671	752	757	754	833	922	922
	Receipts of firm power from:											
7.	Other provinces	1 1	1 1	1 1				1 (1 1	1 1	1 1	, ,
9.	Total receipts	9	t	ı	-		Н	,			,	
	Deliveries of firm power to:											
10.	Other provinces	77	- 64	69	89	72	8.6	88	88	138	888 -	88 1
12.	Total deliveries	77	79	69	89	72	86	88	88	138	88	88
13.	Total net capability (6 + 9 - 12)	168	338	394	471	009	667	699	999	695	834	834
	Peak loads:											
14.	Firm power peak load within province	127	278	299	353	377	418	994	528	578	634	691
16.	Total indicated firm power peak load within province (14 + 15)	127	278	299	353	377	418	994	528	578	634	691
17.	Firm power peak load on province (12 + 16)	204	342	368	421	644	504	554	616	716	722	779
	Indicated reserve:											
18.		41	09	95	118	223	249	203	138	117	200	143

TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

	1965			477	36	.04		, ,	1		7 -	7	161		1,127	.27	134	270
	19			7	-	1,404							1,397		1,1	1,127	1,134	- 4
Forecast	1964			477	35	1,393		1 1	1		7	7	1,386		1,033	1,033	1,040	353
Fore	1963			327	33 130	1,209		1 1	1		9 1	9	1,203		951	951	957	252
	1962			327 648	32 130	1,137		8 1	1		rU I	Ŋ	1,132		876	876	881	256
	1961	watts		327	28	953		1 (ı		5	5	948		836	836	841	112
	1960	thousands of kilowatts		318	607	925		m :	6		- 1		927		714	714	715	213
	1959	thousan		238	530	768		m ۱	m		1	-	770		649	679	650	121
Actual	1958			238	967	734		7 -	4			-1	737		580	580	581	157
	1957			238	350	588		4 -	4			1	592		9/4	914	476	116
	1956			220	338	558		4 -	4		1 1	1	562		451	451	451	111
	1951			162	109	271		5 1	ı		50 1	20	266		220	220	225	746
		Capability:	Net generating capability:	Hydro-electric Steam - Conventional Nan Instrumental	Internal combustion Gas turbine		Receipts of firm power from:	Other provinces	. Total receipts	Deliveries of firm power to:	Other provinces	Total deliveries	. Total net capability (6 + 9 - 12)	Peak loads:		Total indicated firm power peak load within province (14 + 15)	. Firm power peak load on province (12 + 16)	Indicated reserve: . Indicated reserve (13 - 16)
				3.5.	4.	6.		. %	9.		10.	12.	13.		14.	16.	17.	18.

TABLE 1A. Capability and Firm Power Peak Load Requirements - Continued

DETERMINATION TO TRANSTE

					Actual					Forecast	ıst	
		1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	Capability:					thousands	s of kilowatts	vatts				
	Net generating capability:											
25 E	Hydro-electric	806	1,866	2,187	2,356	2,524	2,659	2,672	2,687	2,777	2,781	2,782 583
4.		107	153	163	212	353	369	109	107	112	114	114
. 9	Total net generating capability	1,015	2,019	2,350	2,568	2,877	3,028	3,070	3,369	3,468	3,651	3,652
	Receipts of firm power from:											
7.8	Other provinces	5 -	52	1 1	1 1	1 1	ι ι	5 -	5 1	9 1	7	7
.6	Total receipts	ıΩ	52	ŧ	,		1	5	5	9	7	7
	Deliveries of firm power to:											
10.	Other provinces	30	4	7	7	۳ ۱	n 1	1 1	()	5 1	1 1	
12.	Total deliveries	30	7	4	7	m	en .	1	1	1	1	1
13.	Total net capability (6 + 9 - 12)	066	2,067	2,346	2,564	2,874	3,025	3,075	3,374	3,474	3,658	3,659
	Peak loads:											
14.	Firm power peak load within province	861	1,724	1,821	1,935	1,963	2,123	2,368	2,455	2,595	2,751	2,868
16.	Total indicated firm power peak load within province (14 + 15)	861	1,725	1,821	1,935	1,963	2,123	2,368	2,455	2,595	2,751	2,868
17.	Firm power peak load on province (12 + 16)	891	1,729	1,825	1,939	1,966	2,126	2,368	2,455	2,595	2,751	2,868
	Indicated reserve:											
18.	Indicated reserve (13 - 16)	129	342	525	629	911	902	707	919	879	206	791

Yukon and Northwest Territories

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TABLE 1A. Capability and Firm Power Peak Load Requirements - Concluded

				404.01					TO CE	1 0	
•	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
					thousand	thousands of kilowatts	atts				
Capability:											
Net generating capability:											
Hydro-electric Steam - Conventional)	21	22	25	37	37	5/5	444	44	444	444	44
Nuclear)	,	-	1	m	7	11		' ;	1 (1 ,	1 (
Internal combustion							10	11	12 2	12	12
Total net generating capability	21	23	26	07	41	55	55	56	59	61	61
Receipts of firm power from:											
Other provinces	1 1	1 1		1 1	1 1	1 1	1 1	1 1	1 5	5 4	, ,
Total receipts	ı	t	,	1	1	1	ı	i		1	
Deliveries of firm power to:											
Other provinces	1 1		0 8		1 1	1 0	1 1	1 1	1 1	1 1	
Total deliveries	ŧ	1	,	1	1	1	ŧ	1	ı		1
Total net capability	21	23	26	40	41	55	55	56	59	61	61
Peak loads:											
Firm power peak load within province	14	19	19	30	31	34	29		42	44	44
Total indicated firm power peak load within province (14 + 15)	14	19	19	30	31	34	29	40	42	44	44
Firm power peak load on province (12 + 16)	14	19	19	30	31	34	29	70	745	777	77
Indicated reserve:											
Indicated reserve (13 - 16)	7	4	7	10	10	21	26	16	17	17	17

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14. 15. 18.

TABLE 1B. Energy Supply and Requirements

					Act	Actual				Fore	Forecast	
		1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
~	Net generation by:					millions	of kilowatt-hours	tt-hours				
1:	Hydro-electric	:	:	82,973	90,250	96,517	105,770	103,692	•	:	:	:
2°	Steam - Conventional							8,822	: :	: :	: :	: :
. 4		:	•	7,288	6,507	7,339	8,271	509	:	:	:	:
5.	Gas turbine							248	:	:		:
. 9	Total net generation	:	87,427	90,261	96,757	103,856	114,041	113,271	:	•	:	:
	Receipts of energy from:											
. 8	(a) Firm: Other provinces United States	::	::	::	: :	::	: :	: 00	· ∞	. 6	: 6	. 6
9.	(b) Secondary: Other provinces United States	::		::	: :	: :	: :	1,392	: :	::	::	
11.	Total receipts of energy	:	227	831	244	515	367	1,400		:	:	:
	Deliveries of energy to:											
12.	(a) Firm: Other provinces United States	1,418	1,226	1,172	1,264	1,253	1,283	1,122	1,290	1,066	1,027	7.6
14.	(b) Secondary: Other provinces United States	::	3,885	3,613	2,883	3,331	4,228	3,058	: :		: :	::
16.	Total deliveries of energy	:	5,111	4,785	4,147	4,584	5,511	4,180	:	:	:	:
17.	Total energy available (6 + 11 - 16)	:	82,543	86,307	92,854	99,787	108,897	110,491	:	÷	:	÷
18.	Secondary energy delivered within Canada	:	3,000	2,540	5,615	5,684	6,615	5,415	:	:	:	:
	19. Firm energy available within Canada (17 - 18)	55,516	79,543	83,767	87,239	94,103	102,282	105,076	112,168	120,470	128,031	135,851
0	20. Indicated shortage	312	1,546	554		•	ı	4	,	t	1	
-	21. Firm energy requirement within Canada (19 + 20)	55,828	81,089	84,321	87,239	94,103	102,282	105,076	112,168	120,470	128,031	135,851
	22. Firm energy requirement on Canada (12 + 13 + 21)	57,246	82,315	85,493	88,503	95,356	103,565	106,198	113,458	121,536	129,058	136,825

TABLE 1B. Energy Supply and Requirements - Continued

					Actual				:	Forecast	3.5.¢	
		1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	Net generation by:					million	millions of kilowatt-hours	att-hours				
1:	Hydro-electric	:	:	1,305	1,330	1,320	1,403	1,322	:	:	:	:
3 %	Steam - Conventional							116	: :		• •	: :
4.	Internal	:	•	20	40	54	92	10	:	•		*
5.	Gas turbine)							t	:	:	i	÷
9	Total net generation	:	1,355	1,355	1,370	1,374	1,479	1,448	:		:	
	Receipts of energy from:											
7.	(a) F1	:		:	:	:	:	1	,	ı	,	
ö	(b) Secondary:	:	*	:	:	:	:	1	ı	1	'	ı
10.	United States	::	::	::	::	: :	::	1 1			: :	
11.	Total receipts of energy	:	,	,	6	•			÷	:	÷	:
	Deliveries of energy to:											
12.	(a) Firm: Other provinces United States	1 1	31	97	77	33	67	08	80 4	83	83	833
14.	(b) Secondary: Other provinces United States	::	()	::	: 5	18	36	۳ ۱	: :	::	: :	::
16.	Total deliveries of energy	:	31	94	94	51	85	83	:	:	:	:
17.	Total energy available (6 + 11 - 16)	:	1,324	1,309	1,333	1,323	1,394	1,365	:	:	:	:
18.	18. Secondary energy delivered within province	:	86	119	155	108	74	4	:	:	:	:
19.	19. Firm energy available within province (17 - 18)	1,040	1,226	1,190	1,178	1,215	1,320	1,361	1,679	2,099	2,338	2,534
20.	20. Indicated shortage	ı	,	•	,	1	•	1	1	•	•	1
21.	21. Firm energy requirement within province (19 + 20)	1,040	1,226	1,190	1,178	1,215	1,320	1,361	1,679	2,099	2,338	2,534
22.	22. Firm energy requirement on province $(12 + 13 + 21)$	1,040	1,257	1,236	1,222	1,248	1,369	1,441	1,762	2,182	2,421	2,617

TABLE 1B. Energy Supply and Requirements - Continued

Prince Edward Island

					Actual					Forecast	it	1
		1921	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
12	Net generation by:					millions	millions of kilowatt-hours	tt-hours				
-	Hydro-electric	:	•		1	1		1	:	÷	:	:
								100	:	•	:	•
3.	Steam - Conventional						i	t 1	:	:		•
4.	Internal combustion	*	0	57	63	71	79	7	:	:	:	•
5.	Gas turbine)							-	;		:	:
.9	Total net generation	:	53	57	63	71	79	80	•	•	e a e	:
144												
. 8	(a) Firm: Other provinces United States		* *	1 1			1 1	1 1	1 (1-1	1 1	1 1
9.	(b) Secondary: Other provinces United States	::	: :	, ,	4 1	1 1		(1	• •	: :	: :	::
11.	Total receipts of energy	:	1	,	1	1		Þ	•	4 0	0 0	
	Deliveries of energy to:											
12.	(a) Firm: Other provinces United States	1.3	1 1	1 1	f i	1 1	\$ I	1 1	1 1			1 (
14.	(b) Secondary: Other provinces United States	4 1	1 1	1 1	1 1	4 1	1 1	1 1		::	* *	::
16.	Total deliveries of energy	,	6	1		,	•	1	:	:	:	:
17.	Total energy requirement (6 + 11 - 16)		53	57	63	71	79	80	:	:	:	:
18.	Secondary energy delivered within province	•	ı	1	ı	,	,	1	:	:	:	:
19.	19. Firm energy available within province (17 - 18)	34	53	57	63	71	79	80	102	110	123	134
20.	20. Indicated shortage	1	1	,	1	•		t	1	1	•	
21.	21. Firm energy requirement within province (19 + 20)	34	53	57	63	7.1	79	80	102	110	123	134
22.	22. Firm energy requirement on province (12 + 13 + 21)	34	53	57	63	7.1	79	80	102	110	123	134

TABLE 1B. Energy Supply and Requirements - Continued

Nova Scotia

					Actual					Forecast	ast	
		1921	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	Net generation by:					millions		of kilowatt-hours				
1.	Hydro-electric	:	•	514	651	719	632	549	:	:	:	:
3.	Steam - Conventional							1,301	::	: :	: :	: :
4.	Internal combustion	:	9 3	996	911	996	1,162	•		: :	: :	: :
5.	Gas turbine							1	:	:	:	:
. 9	Total net generation	:	1,465	1,480	1,562	1,640	1,794	1,850	:	:	:	:
	Receipts of energy from:											
7.	(a) Firm: Other provinces	: :		: :	::	: :	::	16	i i	1 (1 1	
9.	(b) Secondary: Other provinces United States	::	6 0 2 0	::	::	::	::	à à	::	::	::	: :
11.	Total receipts of energy	:	,	:	:	:	:	16	:	:	:	:
Д	Deliveries of energy to:											
12.	(a) Firm: Other provinces United States	1 1	∞ ι	о 1	10	14	80	12	9 1	91	٧ ،	9 1
14.	(b) Secondary: Other provinces United States	1 1	i f	1 1	1 1	1 1		79	::	::	::	::
16.	Total deliveries of energy	1	8	6	10	14	80	91	:	:	:	:
17.	Total energy available (6 + 11 - 16)	:	1,457	1,471	1,552	1,626	1,714	1,775	:	•	:	:
18. S	18. Secondary energy delivered within province 19. Firm energy available within province (17 - 18)	1,027	1,457	1,471	1,552	1,626	1,714	1,775	1,832	1,942	2,059	2,183
21. F 21. F 22. F	21. Firm energy requirement within province (19 + 20) 22. Firm energy requirement on province (12 + 13 + 21)	1,027	1,457	1,471	1,552	1,626	1,714	1,775	1,832	1,942	2,059	2,183

TABLE 1B. Energy Supply and Requirements - Continued

New Brunswick

					Actual					Forecast	st	
		1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	Net generation by:					millions	s of kilow	of kilowatt-hours				
į	Hydro-electric	•	:	909	1,066	975	887	766	:	:	:	:
2.	Steam - Conventional							870	::	::	::	: :
. 4		a •	0	755	478	692	842	18		:	:	:
5.	Gas turbine							1		:	:	:
. 9	Total net generation	:	1,251	1,361	1,544	1,667	1,729	1,882	:	:	:	
	Receipts of energy from:											
. %	(a) Firm: Other provinces United States	::	o •	::	::	::	::	31	27	28	30	32
9.	(b) Secondary: Other provinces United States	::	÷ 0	::	::	::	::	79	::	: :	: :	::
11.	Total receipts of energy	:	21	28	26	32	111	124	0	0 0	•	
	Deliveries of energy to:											
12.	(a) Firm: Other provinces United States	- 41	32	29	63	51	1 60	125	152	185	214	160
14.	(b) Secondary: Other provinces United States	::	()	12	1 80	109	107	16		: :	: :	
16.	Total deliveries of energy	:	32	14	151	160	165	219	:	•		
17.	Total energy available (6 + 11 - 16)		1,240	1,348	1,419	1,539	1,675	1,787	*			:
18.	Secondary energy delivered within province	:	4	1	2	2	-	5	:	9	:	:
19.	19. Firm energy available within province (17 - 18)	1,002	1,236	1,347	1,417	1,537	1,674	1,782	1,925	2,201	2,441	2,590
20.	20. Indicated shortage	1	1	1	1	1	1	1	1	•		1
21.	21. Firm energy requirement within province (19 + 20)	1,002	1,236	1,347	1,417	1,537	1,674	1,782	1,925	2,201	2,441	2,590
22.	22. Firm energy requirement on province (12 + 13 + 21)	1,043	1,268	1,376	1,480	1,588	1,732	1,907	2,077	2,386	2,655	2,750

TABLE 1B. Energy Supply and Requirements - Continued

Quebec

					Actual					Forecast	ast	
		1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	Net generation by:					millions		of kilowatt-hours				
ij	Hydro-electric	:	•	37,802	43,340	44,418	50,000	49,432	:	:	*	:
3.5	Steam - Conventional							276	* *	::	: :	
4.	Internal combustion	:	•	185	189	209	273	7	:	:	:	:
5.	Gas turbine							11	:	:	:	:
9	Total net generation	:	37,660	37,987	43,529	44,627	50,273	49,726	:	:	:	:
	Receipts of energy from:											
٠. %	(a) Firm: Other provinces United States	::	* *	::	::	::	::	87	90	06	0 8	90
9.	(b) Secondary: Other provinces United States	::	* *	::	::	::	::	16	::		0 0 0 0 0 0	::
11.	Total receipts of energy	:	45	65	61	83	103	110	:	:	:	:
	Deliveries of energy to:											
12.	(a) Firm: Other provinces United States	4,456	4,117	4,075	4,205	4,211	4,193	4,207	4,248	4,254	4,275	4,273
14.	(b) Secondary: Other provinces United States	* *	394 184	876	1,785	1,415	1,723	1,649	::	::	0 0 0 0 0 0	::
16.	Total deliveries of energy	:	5,186	5,500	6,516	6,172	6,474	6,263	:	0 0	:	:
17.	Total energy available (6 + 11 - 16)	:	32,519	32,552	37,074	38,538	43,902	43,573	:	:	:	:
18.	18. Secondary energy delivered within province	:	2,277	1,716	4,732	4,503	5,350	4,551	:	:	:	:
19.	19. Firm energy available within province (17 - 18)	23,189	30,242	30,836	32,342	34,035	38,552	39,022	39,884	43,230	45,925	49,176
20.	20. Indicated shortage	215	1,546	540	1	1	1	1	,	•	•	,
21.	21. Firm energy requirement within province (19 + 20)	23,404	31,788	31,376	32,342	34,035	38,552	39,022	39,884	43,230	45,925	49,176
22.	22. Firm energy requirement on province (12 + 13 + 21)	28,350	36,396	35,936	37,037	38,738	43,241	43,582	44,626	47,989	50,705	53,955

TABLE 1B. Energy Supply and Requirements - Continued

					Actual					Forecast	ast	
		1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	Net generation by:					million	millions of kilowatt-hours	att-hours				
1.	Hydro-electric	:	:	27,894	27,942	32,301	34,870	33,654	:	:	:	:
2.	Steam - Conventional							1,187	:	:	:	:
. 4	Internal combustion)	:	•	2,089	1,197	976	822	31	: :	: :	: :	: :
5.	Gas turbine							i i	÷	:	:	÷
9	Total net generation	:	28,783	29,983	29,139	33,247	35,692	34,872	:	:	:	:
	Receipts of energy from:											
7 8	(a) Firm: Other provinces United States	::	* *	::	::	::	::	4,188	4,227	4,232	4,251	4,247
9.	(b) Secondary: Other provinces United States	::	* 0 9 0	::	::	::	::	1,649	::	::	::	::
11.	Total receipts of energy	:	4,805	5,375	6,232	6,094	6,182	7,199	:	:	:	:
	Deliveries of energy to:											
12.	(a) Firm: Other provinces United States	703	703	4 658	5 711	5 710	727	7 642	5 7 7	376	308	308
14.	(b) Secondary: Other provinces United States	::	3,681	3,524	2,746	3,154	131	275	::	::	::	::
16.	Total deliveries of energy	:	4,399	4,204	3,508	3,952	4,907	3,833	:	:	:	:
17.	Total energy available (6 + 11 - 16)	:	29,189	31,154	31,863	35,389	36,967	38,238	:		:	:
18.	18. Secondary energy delivered within province	:	120	194	395	485	585	511	:	:		:
19.	19. Firm energy available within province (17 - 18)	20,395	29,069	30,960	31,468	34,904	36,382	37,727	40,634	43,255	45,763	48,105
20.	20. Indicated shortage	97	ı		1	1	1	ŧ	•	•	1	,
21.	21. Firm energy requirement within province (19 + 20)	20,492	29,069	30,960	31,468	34,904	36,382	37,727	40,634	43,255	45,763	48,105
22.	22. Firm energy requirement on province (12 + 13 + 21)	21,198	29,776	31,622	32,184	35,619	37,115	38,376	41,285	43,638	46,078	48,420

Manitoba

TABLE 1B. Energy Supply and Requirements - Continued

					Actual					Forecast	ast	
		1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	Net generation by:					millions		of kilowatt-hours			3	
1:		:	•	3,333	3,082	3,582	3,735	3,591	:	:	:	:
2.	Steam - Conventional							238	::	::	::	::
4.	Internal combustion	:	0 0	5	131	51	75	11	:	:	:	:
5.	Gas turbine							1	•	:	:	:
9	Total net generation	:	3,331	3,338	3,213	3,633	3,810	3,840	:	:	:	:
	Receipts of energy from:		5									
7.	(a) Firm: Other provinces United States	::	* *	::	::	::	::	623	611		616	616
9.	(b) Secondary: Other provinces United States	::		::	::	::	::	301	::	::	::	::
11.	Total receipts of energy	:	555	571	620	652	739	924			:	
	Deliveries of energy to:											
12. 13.	(a) Firm: Other provinces United States	79	76	136		, ,	1 1	7 1	1 1			1 1
14.	(b) Secondary: Other provinces United States	::	38	18	43	m 1	7	7	::	::	::	::
16.	Total deliveries of energy	:	132	154	43	m	4	9	:	:	:	:
17.	Total energy available (6 + 11 - 16)	:	3,754	3,755	3,790	4,282	4,545	4,758	:	:	:	:
18.	18. Secondary energy delivered within province	:	967	408	214	393	344	09	:	:	:	÷
19.	19. Firm energy available within province (17 - 18)	2,443	3,258	3,347	3,576	3,889	4,201	4,698	5,023	5,266	5,499	5,762
20.	20. Indicated shortage	ı	1	t	1	ı	t	1		1	1	1
21.	21. Firm energy requirement within province (19 + 20)	2,443	3,258	3,347	3,576	3,889	4,201	4,698	5,023	5,266	5,499	5,762
22.	22. Firm energy requirement on province (12 + 13 + 21)	2,522	3,352	3,483	3,576	3,889	4,201	4,700	5,023	5,266	5,499	5,762

TABLE 1B. Energy Supply and Requirements - Continued

					Actual					Forecast	ast	
		1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	Net generation by:					million	millions of kilowatt-hour	att-hours				
ij	Hydro-electric	:	:	979	569	586	620	658	*	:	;	÷
3.6	Steam - Conventional			,				1,682		: :	: :	: :
4.	Internal	:	:	1,147	1,333	1,498	1,659	109	:	:	:	: :
5.	Gas turbine							62	:	:	÷	:
9	Total net generation	:	1,569	1,693	1,902	2,084	2,279	2,511	:	:	:	:
	Receipts of energy from:											
r, ∞	(a) Firm: Other provinces United States	::	::	::	::	::	::	1 1	t 1	1 1	1 1	, ,
9.	(b) Secondary: Other provinces United States	::	::	::	::	::	::	9 +	::	::	::	::
11.	Total receipts of energy	:	,	m	m	80	9	9	:	:	:	:
	Deliveries of energy to:											
12.	(a) Firm: Other provinces United States	515	554	203	504	517	575	621	611	643	616	616
14.	(b) Secondary: Other provinces United States	::		- 67	79	78	77	41		::	::	::
16.	Total deliveries of energy	:	554	570	583	595	619	662	*	:	:	:
17.	Total energy available (6 + 11 - 16)	:	1,015	1,126	1,322	1,497	1,666	1,855	•	:		:
18.	18. Secondary energy delivered within province	:	'		1	ı	,	ŝ	:	:	:	:
19.	19. Firm energy available within province (17 - 18)	797	1,015	1,126	1,322	1,497	1,666	1,855	2,149	2,356	2,657	2,889
20.	20. Indicated shortage	•	•	ı	1	1	1	1		8	1	•
21.	21. Firm energy requirement within province (19 + 20)	467	1,015	1,126	1,322	1,497	1,666	1,855	2,149	2,356	2,657	2,889
22.	22. Firm energy requirement on province (12 + 13 + 21)	982	1,569	1,629	1,826	2,014	2,241	2,476	2,760	2,999	3,273	3,505

TABLE 1B. Energy Supply and Requirements - Continued

TABLE 1B. Energy Supply and Requirements - Continued

					Actual					Forecast	ıst	
		1921	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	Net generation by:					millions		of kilowatt-hours				
1.	Hydro-electric	:	•	10,054	11,148	11,673	12,584	12,295	:		•	* *
2.	Steam - Conventional							535	: :	: :	: :	: :
4.	Internal combustion	:	:	487	534	603	729	246	:	:	:	:
5.	Gas turbine							10	:	:	:	:
9	Total net generation	:	9,774	10,541	11,682	12,276	13,313	13,086	•	:		:
	Receipts of energy from:											
. 8	(a) Firm: Other provinces United States	::	::	::	::	::	::		2	7	2 1	7 7
9.	(b) Secondary: Other provinces United States	::	• •	::	::	: :	::	16	::	::	::	::
11.	Total receipts of energy	:	52	545	18	30	72	18	:	:	:	:
	Deliveries of energy to:											
12.	(a) Firm: Other provinces United States	184	10	6 1	V 1	91	5 3	7 0 0	10	12	13	13
14.	(b) Secondary: Other provinces United States	::	19 20	13	13 13	28	27	30		* *		::
16.	Total deliveries of energy	:	64	35	32	48	48	55	0		:	:
17.	Total energy available (6 + 11 - 16)	:	777,6	11,051	11,668	12,258	13,337	13,049	•	•		
18.	18. Secondary energy delivered within province	:	1	06	89	167	233	242	:	:		:
19.	19. Firm energy available within province (17 - 18)	4,741	6,777	10,961	11,579	12,091	13,104	12,807	14,670	15,419	16,293	17,166
20.	20. Indicated shortage		ě	14	1	12,091	1	1	2	đ	1	1
21.	21. Firm energy requirement within province $(19 + 20)$	4,741	777,6	10,975	11,579	ı	13,104	12,807	14,670	15,419	16,293	17,166
22.	22. Firm energy requirement on province $(12+13+21)$	4,925	9,787	10,984	11,585	12,097	13,109	12,815	14,680	15,431	16,306	17,179

Yukon and Northwest Territories

TABLE 1B. Energy Supply and Requirements - Concluded

Forecast	1962 1963 1964 1965		:	::	:	:				::				::			:	208 209 211 216	1	208 209 211 216	208 209 211 216
	1961	of kilowatt-hours	174	- 7	19	1	195		1 1	1 1	1		1 1	1 1	1	195	42	153	ı	153	153
	1960		152		14		166		::	::	:		1 1		,	166	28	138	t	138	138
	1959	millions	146		21		167		::	::	:		• •		1	167	26	141	t	141	141
Actual	1958		131		15		146		::	::	:		1 1	k 1	,	146	28	118	1	118	118
	1957		112		14		126		::	::	:				'	126	12	114	1	114	114
	1956		•		:		110		::	ë e e e	•			4 1	'	110	2	105	1	105	105
	1951		:	??	:	~ <u>_</u>	:		::	::	:		1 1		'	:	:	79 .	1	99	79
		Net generation by:	Hydro-electric	Steam - Conventional	Internal combustion	Gas turbine	Total net generation	Receipts of energy from:	(a) Firm: Other provinces United States	(b) Secondary: Other provinces United States	Total receipts of energy	Deliveries of energy to:	(a) Firm: Other provinces United States	(b) Secondary: Other provinces United States	Total deliveries of energy	Total energy available (6 + 11 - 16)	18. Secondary energy delivered within province	19. Firm energy available within province (17 - 18)	20. Indicated shortage	21. Firm energy requirement within province $(19 + 20)$	22. Firm energy requirement on province (12 + 13 + 21)
			ij.	3.	4.	5.	9		7.	9.	11.		12.	14.	16.	17.	18.	19.	20.	21.	22.

									Forecast	ast		Perc (c	Percentage Change (compounded)	nange 1)
Province	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1951 1961	1957	1961 1965
								thousands	of kilowatts	ts				
Newfoundland (including Labrador)	200	242	249	271	267	309	311	404	502	504	504	4.52	5.72	12.8
Prince Edward Island	84	18	25	26	25	38	37	39	59	59	19	7.47	10.3	13.3
Nova Scotia	246	378	415	411	493	499	508	508	508	527	527	7.52	5.18	0.91
New Brunswick	196	286	321	372	373	388	436	476	534	534	592	8,32	7.95	7.95
Quebec	4,613	5,890	6,461	7,053	7,681	8,764	8,738	8,913	9,138	9,528	10,354	6,61	7.82	4.33
Ontario	2,824	4,565	4,932	5,881	6,275	6,650	6,858	7,529	8,102	8,399	8,993	9.28	8.60	7.00
Manitoba	423	602	639	734	734	932	905	1,033	1,033	1,138	1,243	7.90	9.08	8.20
Saskatchewan	245	402	463	538	671	752	757	754	833	922	922	11.94	13.08	5.05
Alberta	271	558	558	734	768	925	953	1,137	1,209	1,393	1,404	13.40	14.32	10.20
British Columbia	1,015	2,019	2,350	2,568	2,877	3,028	3,070	3,369	3,468	3,651	3,652	11.70	06.90	47.44
Yukon and Northwest Territories	21	23	26	40	41	55	55	56	59	61	61	10.10	20.60	2.62
Canada	10,072	14,983	16,439	18,628	20,205	22,340	22,628	24,218	25,445	26,716	28,313	8.43	8.39	5.76
(1) Table 1A, item 6.														

TABLE 3. Firm Power Peak Load within Provinces(1)

									Forecast	1st		Perce (co	Percentage change (compounded)	nge
Province	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1951 1961	1957	1961 1965
				mi1	millions of	kilowatt hours	hours							
Newfoundland (including Labrador)	1,040	1,226	1,190	1,178	1,215	1,320	1,361	1,679	2,099	2,338	2,534	2.73	3.42	16.81
Prince Edward Island	34	53	57	63	71	79	88	102	110	123	134	10.00	11.50	11.09
Nova Scotia	1,027	1,457	1,471	1,552	1,626	1,714	1,775	1,832	1,942	2,059	2,183	5.62	4.82	5.31
New Brunswick	1,002	1,236	1,347	1,417	1,537	1,674	1,782	1,925	2,201	2,441	2,590	5.93	7.23	9.79
Quebec	23,404	31,788	31,376	32,342	34,035	38,552	39,022	39,884	43,230	45,925	49,176	5.24	5.61	6.00
Ontaxio	20,492	29,069	30,960	31,468	34,904	36,382	37,727	40,634	43,255	45,763	48,105	6.29	5,08	6.26
Manitoba	2,443	3,258	3,347	3,576	3,889	4,201	4,698	5,023	5,266	5,499	5,762	6.76	8.85	5.23
Saskatohewan	194	1,015	1,126	1,322	1,497	1,666	1,855	2,149	2,356	2,657	2,889	14,60	13.30	11.70
Alberta	1,114	2,105	2,358	2,624	3,097	3,452	3,808	4,062	4,383	4,722	5,096	15.30	12.80	7.55
British Columbia	4,741	9,777	10,975	11,579	12,091	13,104	12,807	14,670	15,419	16,293	17,166	10.50	3.94	7.59
Yukon and Northwest Territories	99	105	114	118	141	138	153	208	209	211	216	9.11	7.63	9.01
Canada	55,828	81,089	84,321	87,239	94,103	102,282	105,076	112,168	120,470	128,031	135,851	6,53	5.63	6,63
(1) Table 1B, item 21.														

TABLE 5. Indicated Reserve(1)

, and a second		r C	i c							Fore	Forecast		Perce (co	Percentage change (compounded)	ange)
Frovince		1661	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1951	1957	1961
						thon	thousands of	kilowatts							
Newfoundland (including Labrador):	or):														
1. Gross capability	ince	200	242 230	249	271 239	267 238	309	311 255	404	502	504	504	3.43	5.70	12.82
3. Indicated reserve (1 = 2)	• 1 · 0 · 0 · 0 · 0 · 0 · 0 · 0 · 0 · 0 ·	18	12	21	32	29	50	56	80	133	89	81	:	:	:
cent of firm power peak lo	ad over	6.6	5.2	9.5	13.4	12.2	19,3	22.0	27.8	36.0	21.4	19,1	*	:	:
Prince Edward Island:															
1. Gross capability	Ince	18	18	25	26	25	38	37	39	59	59	61	7.47	10.30	13.30
3. Indicated reserve (I = 2)	• \$4 • G • G	10	9	11	10	9	17	13	13	30	27	25	:	:	:
cent of firm power peak l	1 :	125.0	50.0	78.6	62.5	31.6	81.0	54.2	50.0	103.4	84.4	4.69	:	:	:
Nova Scottia.															
bilitypeak load on prov	fince	248 187	378	415	411	493	359	508	508	508	527	527 435	7.43	5.18	0.91
3. Indicated reserve (1 - 2)		61	75	91	73	160	140	160	142	122	118	92			
cent of firm power peak lo	a ber	32.6	24.8	28.1	21.6	48.0	39.0	0.94	38.8	31.6	28.9	21.1		:	:
New Brunswick:															
1. Gross capability	nce	200	291 248	326	380	380	395	442	482	542	542	600	8.25	7.89	7.93
3. Indicated reserve (1 - 2)	s a Der	16	43	09	86	80	53	101	1111	66	69	115	:	:	:
cent of firm power peak load	p	8.7	17.3	22.6	34.8	26.7	15.5	29.6	29.9	22.3	14.6	23.7	:	:	;
(1) Gross capability (Table 1A ite	ems 6 + 9);	firm	ower pea	ik load o	n provin	ce (Table	1A item	power peak load on province (Table 1A item 17); indicated reserve (Table 1A item 18)	cated res	erve (Tab	le IA ite	m 18)			

									Fore	Forecast		Perce (co	Percentage change (compounded)	inge
Province	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1951	1957 1961	1961 1965
					thous	thousands of kilowatts	cilowatts							
Gross capability	4,614	5,901	6,468	7,062	7,690	8,780	8,759	8,934	9,157	9,546	10,372	6.62	7.87	4.31
Indicated reserve (1 - 2)	417	361	760	957	1.471	2, 154	1,767	1,598	1,332	1,253	1,467			
Indicated reserve expressed as a per cent of firm power peak lead	6.6	6.5	7.7	15.7	23.7	32.5	25.3	21.8	17.0	15.1	16.5			: :
<u>Ontario</u> :														
Gross capability	3,568	5,267 5,151	5,637	6,549 5,881	6,967	7,344 6,479	7,553	8,225	8,800	9,099	9,785	7.79	7.59	6.70
	190	116	181	899	725	865	847	1,040	1,223	1,106	1,363	:	:	:
Indicated reserve expressed as a per cent of firm power peak load	5.6	2.3	3.3	11.4	11.6	13.4	12.6	14.5	16.1	13.8	16.2	:	:	:
Manitoba: Gross capability	500	666	708	802	908	1,018	888	1,121,889	1,171,929	1,226	1,331	7.05	8.70	7.73
	37	47	86	156	116	246	139	232	142	257	416		:	:
Indicated reserve expressed as a per cent of firm power peak load	8.0	7.6	13.8	24.1	16.8	31.9	16.4	26.1	15.3	26.5	45.5	:	:	:
Saska tchewan:														
Gross capability	245	402	463	539	672	753	757 554	754 616	833	922	922	11.94	13.06	5.00
	41	09	95	118	223	249	203	138	117	200	143	:	÷	:
Indicated reserve expressed as a per cent of firm power peak load	20.1	17.5	25.8	28.0	49.7	4.64	36.6	22.4	16.3	27.7	18.4	:	:	÷

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(1) Gross capability (Table 1A items 6 + 9); firm power peak load on province (Table 1A item 17); indicated reserve (Table 1A item 18).

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TABLE 5, Indicated Reserve(1) - Concluded

										For	Forecast		Perce (co	Percentage change (compounded)	ange (
	Province	1951	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1951	1957	1961
						tho	thousands of	kilowatts							
	Alberta:														
1.	Gross capability	271	562	592	738	771 650	928	953	1,137	1,209	1,393	1,404	13.40	12.63	10.20
e, 4	Indicated reserve (1 - 2)Indicated reserve expressed as a ner	94	111	116	157	121	213	112	256	252	353	270	:	:	:
	cent of firm power peak load	20.4	24.6	24.4	27.0	18.6	29.8	13.3	29.1	26.3	33.9	23.8	:	:	:
1,0	British Columbia: Gross capability	1,020	2,071	2,350	2,568	2,877	3,028	3,075	3,374	3,474	3,658	3,659	11.66	7.00	4,42
•	ratm power pean toda on province	160	1,127	1,023	1,323	1,900	7,120	2,308	7,420	2,595	2,731	2,868	10.27	6.72	4.90
ب ب ب	Indicated reserve (1 - 2)Indicated reserve expressed as a per	129	345	525	629	911	905	707	919	879	406	791	:	:	:
	ad	14.5	19.8	28.8	32.4	46.3	42.4	29.9	37.4	33.9	33.0	27.6	:	:	:
•	Yukon and Northwest Territories:														
1.	Gross capability	21 14	23	26 19	30	41	34	55 29	56	59	61 44	61	10.11	20.60	2.62
ۍ «		7	4	7	10	10	21	26	16	17	17	17	:	:	:
÷	cent of firm power peak load	50.0	21.1	36.8	33,3	32,3	61.8	89.7	40.0	40.5	38.6	38.6	:	:	÷
	Canada:														
1.	Gross capability	10,076	15,039	16,469	18,628	20,205	22,340	22,630	24,220	25,448	26,719 22,323	28,316 23,536	8.43	8.27	5.76
.4,	Indicated reserve (1 - 2)Indicated reserve expressed as a nor	165	1,177	1,653	2,908	3,852	4,910	4,131	4,551	4,446	3,396	4,780	:	:	:
		6.2	8.5	11.2	18.5	23.5	28.2	22.3	23.1	21.2	15.2	20.3	:	:	÷
(1)	(1) Gross capability (Table 1A items 6 + 9);	firm	power	peak load	on provi	on province (Table	e 1A item	17);	indicated reserve (Table	serve (Ta	ble 1A it	1A item 18).			

GLOSSARY OF TERMS

Firm Energy Requirement

Energy required to meet firm obligations, or for use in own industrial plant other than in electric boilers.

Firm Power

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

Firm Power Peak Load

The annual Firm Power maximum average net kilowatt load of one hour duration within the Utility, System or Industrial Establishment.

Firm Obligations

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis or the best estimate of firm obligations in the absence of contracts.

Indicated Demand

The sum of firm power peak load and indicated shortage.

Indicated Reserve

Net capability less indicated firm power peak load within the province or gross capability less firm power peak load on the province.

Industrial Establishment

A firm which generates power primarily for use in its own plants.

Net Generating Capability

The maximum net kilowatt output (after station service) available from the generating facilities of the Utility, System or Industrial Establishment with all equipment available, at the time of the annual Firm Power Peak Load, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

Vet Capability

The sum of net generating capability and purchases of firm power under firm obligation from other utilities less deliveries of firm power under firm obligation to other utilities.

System

Two or more Utilities, Industrial Establishments or a combination of these, naving interconnections for the exchange of power, which although they may be separately incorporated, are controlled, managed or operated by one principal.

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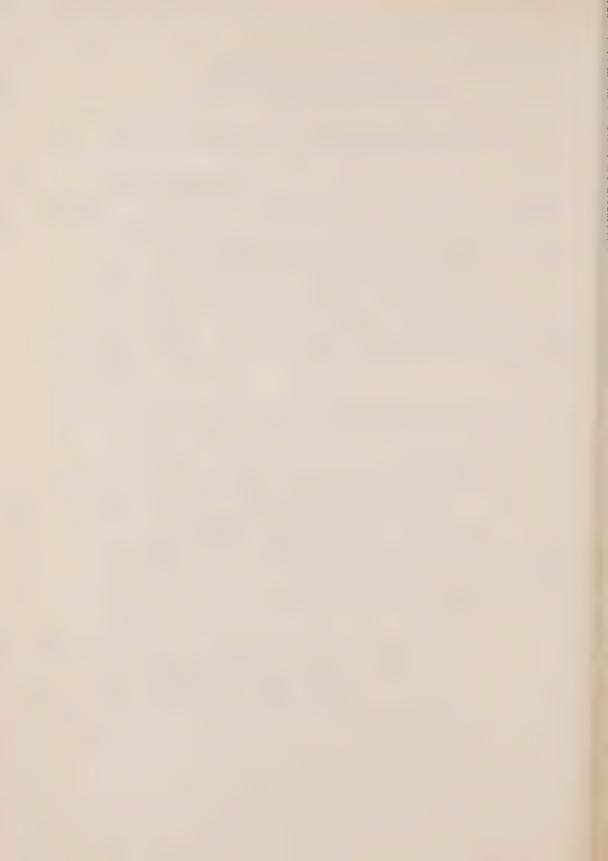
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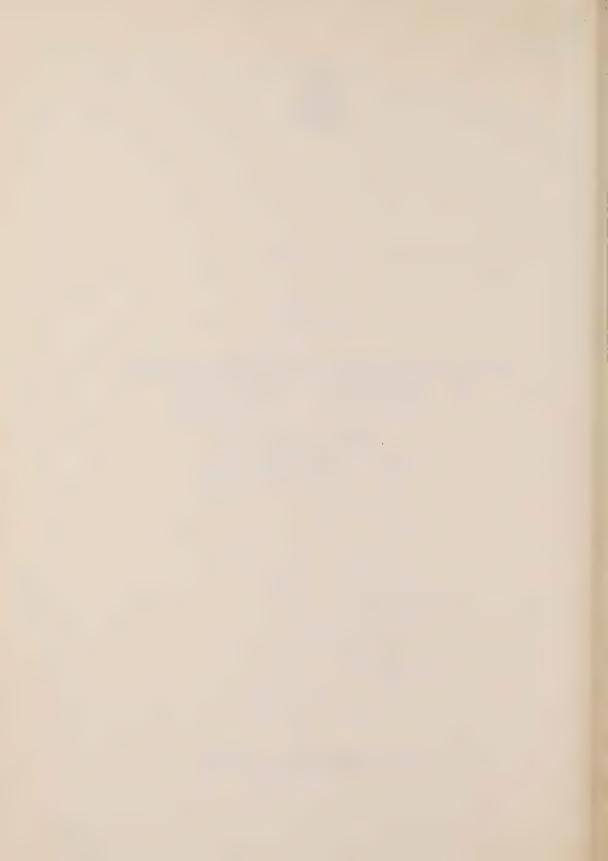
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ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

1962 Actual 1963 - 1966 Forecast



DOMINION BUREAU OF STATISTICS



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Public Finance and Transportation Division
Public Utilities Section

ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

1962 **Actual** 1963 - 1966 **F**orecast

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Reports Published by the Public Finance and Transportation Division dealing with

ELECTRIC POWER

Catalogu number	Title	Pric
	Annual	
57-201	Electric and Gas Meter Registrations. Approx. 250pp.	
	Meter registrations by province, county or census division, company and place served, by type of service	\$2.
57-202	Electric Power Statistics. Approx. 48pp.	
	Summary and detailed analyses of generation and use of electric power in Canada, power plant equipment, customers, employees, salaries and wages and financial statistics	•
57-203	Electricity Bills for Domestic, Commercial and Small Power Service. Approx. 15pp.	
	Includes an annual index of electricity bills for domestic service, and bills for light and power in cities and representative municipalities	•
57-204	Electric Power Survey of Capability and Load. Approx. 45pp.	
	Current and projected data of capability and load of major producers of electric energy in Canada	
	Monthly	
57-001	Electric Power Statistics. Approx. 4pp.	
	Production by utilities and industrial establishments, imports and exports, power made available for use in Canada, amount used in electric boilers, by provinces. Per copy 10¢; per year	\$1.
	Occasional	
57-502	Inventory of Prime Mover and Electric Generating Equipment. Approx. 120pp.	
	A list of generating plants in Canada by ownership showing the location, year of installation, name-plate rating and other details of each unit, as at December 31, 1961	\$1.

TABLE OF CONTENTS

		Page
[n	troduction	5
	CHARTS	
١.	Total Generating Capability within Canada This chart graphically portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important.	8
3.	Net Capability and Peak Loads within Canada	9
3.	Net Generating Capability within Provinces	10
١.	Net Capability and Firm Demand within Provinces	12
	Firm Energy Requirement within Canada	14
	TABLES	
A	Capability and Firm Power Peak Load Requirements	15
R.	Energy Supply and Requirements	27
	This table summarizes current and historical data on generation, interprovincial receipts and deliveries, secondary energy, and firm energy requirements.	
	Total Net Generating Capability within Provinces	39
>	This table compares rates of growth of firm power peak load within provinces.	40
-	This table compares rates of growth of firm energy requirement within provinces.	41
	Indicated Reserve This table shows the relationship between the demand for power and the ability to meet it in each of the provinces and in Canada as a whole.	42
(.0	ossary of Terms	45

SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:

- r Revised figures.
- .. Figures not available.
- ... Figures not appropriate or not applicable.
 - Nil or zero.

INTRODUCTION

This report presents the results of the Annual Electric Power Survey of Capability and Load which was conducted in March 1963. The survey covers all producers of electric energy in Canada which generate 10 million kwh. or more per annum. This report, therefore, covers the same group of firms which provide the statistics for the monthly "Electric Power Statistics" report (catalogue No. 57-001). The report is organized in such a manner that there is a direct comparison and link with the monthly "Electric Power Statistics" in that the generation figures are common to the two publications: Any differences are due to late revisions.

There are approximately 146 responding firms in the group, of which 46 per cent are utilities and the balance industrial establishments. The combined group accounts for 99.6 per cent of all generation, and all the imports and exports. The utilities group contributes 79 per cent of the generation to the Canada total.

The survey is carried out in co-operation with the Canadian Electrical Association. Area representatives of the Association collect and edit the returns, which are forwarded to the Dominion Bureau of Statistics for final revision, editing, and compilation. The assistance received from the Canadian Electrical Association and its members has been invaluable in making possible the early release of the survey data.

Review of Survey Results

Total net generating capability in 1962 for firms which generate over 10 million kwh. per year necessed 1,241,000 kw., or 5.52 per cent, to 23,869,000 kw. The forecast years, 1963-1966, indicate a growth of 5,169,000 kw., or a compound growth rate of 4.8 per cent, as compared with the previous leven-year period, 1951-1962, when the growth rate was 8.2 per cent. Thermal capability is expected or grow at the rate of 9.8 per cent per year in the forecast period, compared to 15.7 per cent in the revious eleven-year period, while hydro-electric capability is expected to increase at 3.5 per cent er year compared to 6.8 per cent in the previous eleven years. Most of the thermal capability in-rease will be in steam plants. There will be a small growth in the thermal capability of gas turbines, hile the thermal capability of internal combustion plants will be virtually unchanged.

The first nuclear capability is forecast for 1965, although this may be postponed, due to elays in construction or bringing the plant on line. The nuclear capability does not include the 0,000 kw. plant at Rolphton, Ontario, which is an experimental plant and not considered part of apability.

The 1962 forecast of generating capability was 349,000 kw. higher than that actually obtained, adicating a delay in completing some plants until the period 1963-1964. The forecast for 1962 enerating capability was approximately realized in all provinces except Ontario, which was signicantly under the forecast, and which accounted for 88 per cent of the difference between the 1962 apability as forecast and the actual net generating capability.

The largest absolute growths in generating capability for the forecast years are indicated for itario - 1,985,000 kw., Quebec - 1,427,000 kw., Alberta - 498,000 kw., and British Columbia - 379,000 kw. Whereas Quebec will meet most of the increased generating capability by adding over 1,127,000 kw. in thydro capability and 300,000 kw. in thermal capability, Ontario plans to increase its capability by iding 1,478,000 kw. in thermal capability, including 200,000 nuclear kw. and only 508,000 hydro kw. berta plans to add 228,000 kw. in thermal capability and 300,000 kw. in hydro capability.

The firm power peak loads have not shown the same change in rate of growth as generating capability. In the period from 1951 to 1962 the growth rate of firm power peak loads in Canada was 7 per cent, while the forecast rate of growth for the period from 1962 to 1966 is 6.5 per cent. As a result, the indicated reserve is expected to amount to 5,007,000 kw. in 1963, is expected to increase in 1964, and is expected to decline in 1965-1966 to 4,987,000 kw. and 4,526,000 kw. respectively. The indicated reserve, stated as a percentage of firm power peak load, is forecast to decline steadily throughout the forecast period, from 23.4 per cent in 1963 to 17.9 per cent in 1966.

From 1961 to 1962 firm energy requirements increased 5.7 per cent from 105,076 million kwh. to 11,043 million kwh., an increase of 5,967 million kwh. This increased requirement was supplied by an increase in net generation of 3,760 million kwh., a drop in net exports of 1,482 million kwh., and a decrease in the amount of secondary power consumed in Canada of 725 million kwh. All provinces share in the current increase. This rate of growth of firm energy requirements compares to a growth rate of 6.5 per cent in the previous eleven-year period, and the growth rate of 6.2 per cent that is forecast for the period from 1962 to 1966.

In co-operation with the National Energy Board, the Dominion Bureau of Statistics conducted a survey of thirty-one large producers of electric energy located in all provinces except Prince Edward Island. These firms were asked to supply us with daily load curve data for both December 20, 1962, a the day of their firm power peak for the year 1962. The data was to cover the reporting firm's syste and all systems within it. Among other things, these reports showed the net generation of the reporting system for each hour of December 20 and the day of the system's firm power peak load.

The result of the survey indicated that the net generation of power usually reached its hourl peak at 6 p.m. on the day of firm power peak load, and that the low point was at 4 a.m. From 4 a.m. 12 noon the curve rose, with the sharpest increase in demand coming between 7 a.m. and 8 a.m. From 1 noon to 1 p.m. the curve declined slightly and levelled off between 1 p.m. and 4 p.m. At 4 p.m. the rise to the 6 p.m. peak started, and from 6 p.m. to 12 midnight there was a steady decline. The variation in net generation on the day of firm peak power load for Canada, based on the figures suppl by these 31 firms, varied by about 68 per cent between the low point at 4 a.m. and the peak at 6 p.m.

Concepts and Definitions

Table 1A. Capability and Firm Power Peak Load Requirements:

The generating capability and firm power peak load concepts are virtually unchanged from previous reports. However, more detail has been provided in the generating capability which is now broken down to identify conventional steam, nuclear steam, internal combustion, and gas turbine equip ment. Generating capability measures the expected power of all available generating facilities of th province (or nation) at the time of one-hour firm peak load for each of the respondents. This may be equal to, or smaller than, the generating capacity as measured by the name plate rating of the equipment and published in the "Prime Mover and Electric Generating Equipment" report.

The variations between generating capability and generating capacity may be caused by high water in reservoirs resulting in a higher water head and greater generation than the name plant capacity; the impossibility of placing all pieces of equipment on the line at the same time, low wate ice, or some equipment being considered unreliable, thereby resulting in generation below capacity.

All figures in Table 1A of the report are calculated at the time of the one-hour peak load for each of the respondents. As a result, capability and peak loads are non-coincident (the arithmetics of the actual peak loads regardless of time of occurrence) and may be equal to, or smaller than, the coincident peak load for each of the provinces. Insofar as the utilities have about 80 per cent of the load of the nation and most of the peak loads occur in December, the variation from the coincident pewill not be too great. Two major systems which account for almost 40 per cent of the capability have only a slight variation between their coincident and non-coincident peak loads. Of thirty-nine major systems serving Canada, eleven had peak loads on December 20, three on December 21, 14 on other dates between November 30 and January 31 and eleven outside this period.

Receipts and deliveries of firm power used in calculating net capability are the interprovincial and international transfers of power under firm contracts, or the best estimate of firm obligations possible in the absence of contracts. The actual receipts and deliveries of firm and secondary power are taken into account in the calculation of firm power peak loads.

<u>Peak loads</u> are the total demands within a province after all inter-changes have been taken into account to remove any duplication. The peak loads include all electricity consumed by ultimate customers, line losses, and manufacturing plants own consumption, but do not include generating station service which is deducted before arriving at generating capability. Firm power peak loads exclude the secondary or surplus energy used by ultimate customers on an interruptible basis, as these are not firm obligations.

Indicated shortages are a measure of the firm power commitments that a system was not able to meet at the time of its peak load.

The <u>indicated power reserve of a province</u> (shown in Table 1) is the reserve after all firm obligations and shortages have been met or received. It is the difference between net capability and cotal firm peak load within the province or gross capability less firm power peak load on the province, and is a measure of the industries' ability to satisfy demands of a province and meet contingencies. Ince not all systems are fully interconnected, the reserves of power shown cannot always be fully itilized.

able 1B. Energy Supply and Requirements:

Net generation figures which are identical with the figures presented in the monthly "Electric ower Statistics" report (or revisions thereof) are exclusive of station service and, for 1962, are ubdivided by type of generation. No forecasts of generation are given for 1963-66.

Although complete historical figures are not currently available, it is expected that they will a included in future reports.

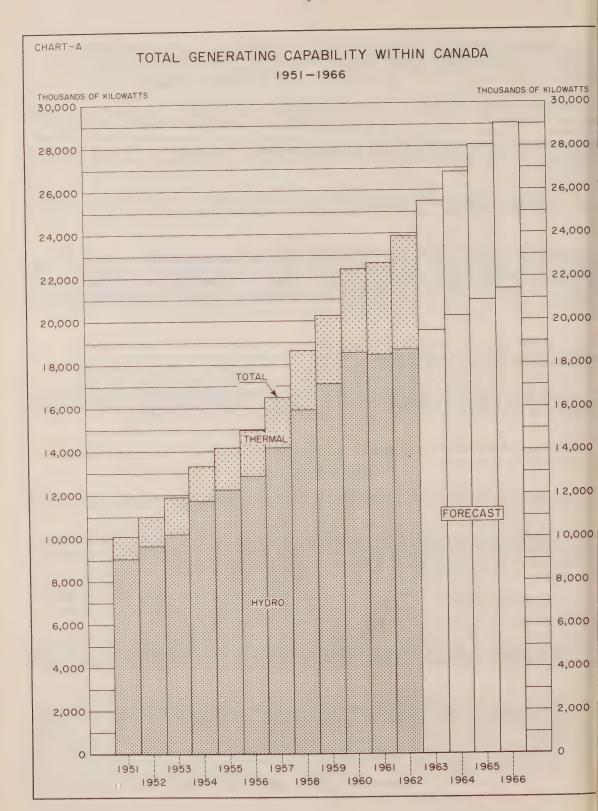
Firm energy receipts and deliveries are the actual receipts and deliveries under firm contracts robligations.

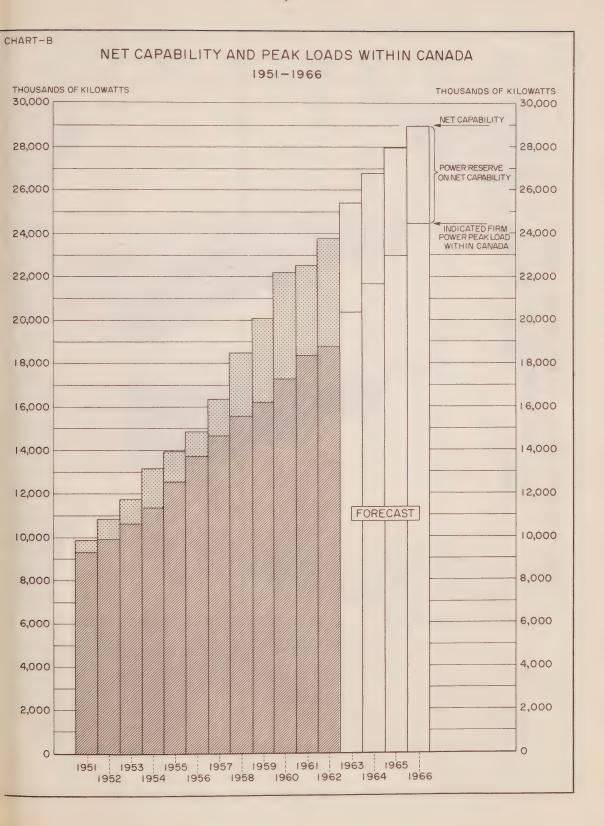
Secondary energy delivered within the province is the surplus energy sold at time of low demand in when surplus generating capability is available. This energy may be interrupted at any time and, passequently, sells at very low rates, generally for use in electric boilers.

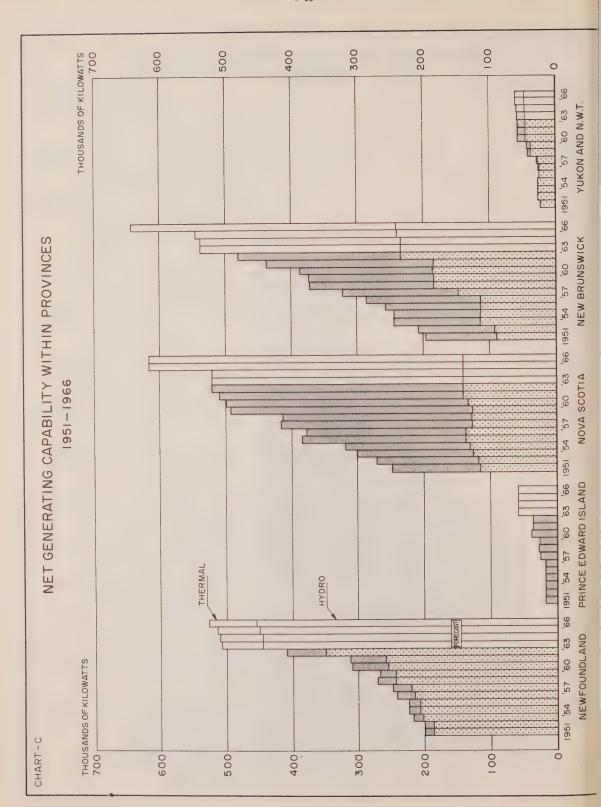
Firm energy available is the measure of primary demands of electric energy, including residentil, commercial and power sales, and all line losses after deducting net exports. It is an important conomic indicator and, as such, is of major importance in forecasting.

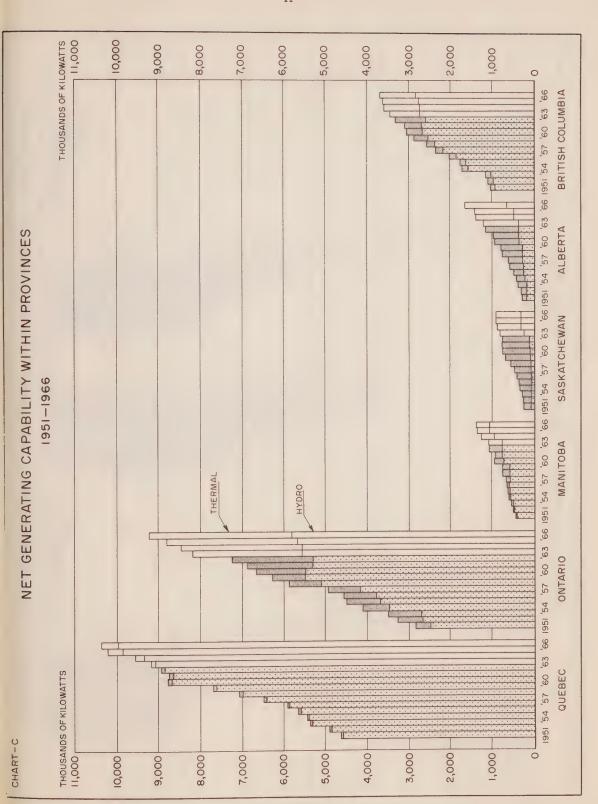
Indicated shortage is an estimate of the total quantity of energy a system was unable to deliver to its inability to meet firm power commitments during the year; no shortages have occurred since .57.

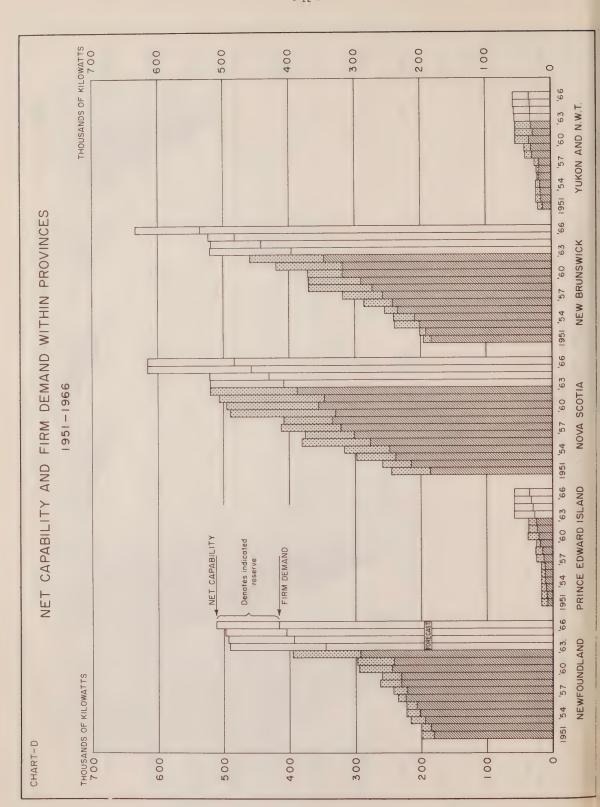
Firm energy requirements are a measure of the needs for electric energy that have been or can met (firm energy available) and those that cannot be serviced (shortage).

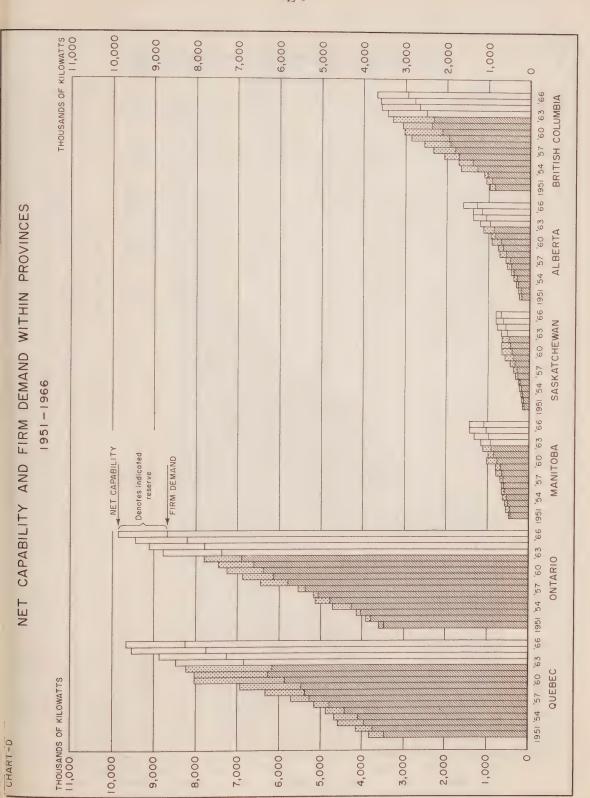


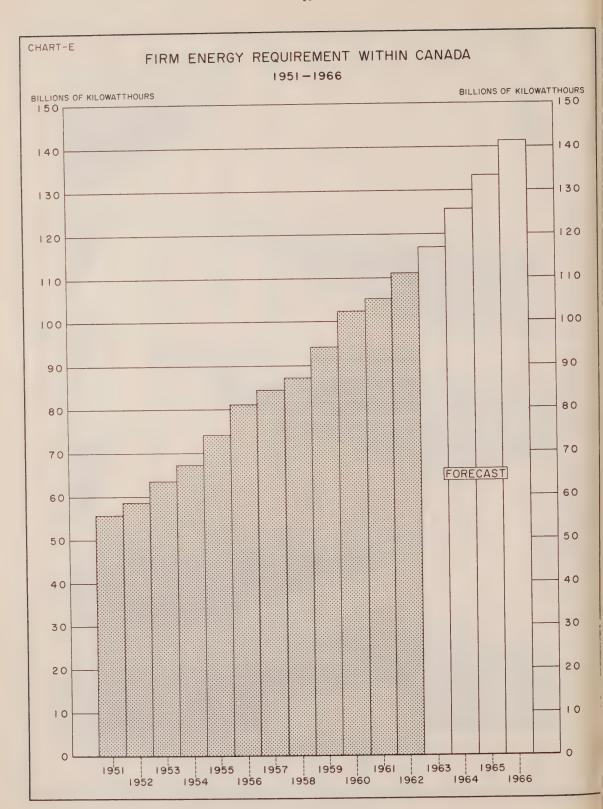












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Conobil	ou party	
TARTE 1A Co	THE PERSON	

					Actual					Forecast	cast	
		1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
	Gapability:					thousar	thousands of kilowatts	watts				
	Net generating capability:											
7.5	Hydro-electric Steam - Conventional)	6,044	14,143	15,912	17,086	18,516	18,389	18,651	19,497 5,377	20,184 5,993	20,937 6,268	21,441 6,728
, 4.0	Nuclear))	1,032	2,326	2,716	3,119	3,824	240 (240 (351	251 371	248 376	255 379	200 258 379	200 262 397
. 9	Total net generating capability	10,076	16,469	18,628	20,205	22,340	22,628	23,869	25,498	26,811	28,042	29,028
	Receipts of firm power from:											
7.	Other provinces	: '	: '	: '	: '	: 1		4	***	7	***	7
9.	Total receipts	•	,		ı	,	2	4	4	7	7	7
	Deliveries of firm power to:											
10.	Other provinces	175	150	152	152	166	146	121	118	69	70	56
12.	Total deliveries	175	150	152	152	166	146	121	118	69	70	56
13.	Total net capability (6 + 9 - 12)	9,901	16,319	18,476	20,053	22,174	22,484	23,752	25,384	26,746	27,976	28,976
	Peak loads:											
14.	Pirm power peak load within CanadaIndicated shortages	8,989	14,664	15,568	16,201	17,264	18,353	18,972	20,377	21,656	22,988	24,446
16.	Total indicated firm power peak load within Canada (14 + 15)	9,310	14,666	15,568	16,201	17,264	18,353	18,972	20,377	21,656	22,989	24,450
17.	Firm power peak load on Canada (12 + 16)	9,485	14,816	15,720	16,353	17,430	18,499	19,093	20,495	21,725	23,059	24,506
	Indicated reserve:											
18.	Indicated reserve (13 - 16)	591	1,653	2,908	3,852	4,910	4,131	4,780	5,007	5,090	4,987	4,526

TABLE 1A. Capability and Firm Power Peak Load Requirements

Newfoundland

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				Actual					Forecast	cast	
	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
Capebility:					thousar	thousands of kilowatts	watts				
Net generating capability:											
. Hydro-electric Steam - Conventional)	188	220	243	243	255	258	350	446	446	450	454
Nuclear)	12	29	28	24	54	13	14	15	17	17	17
Total net generating capability	200	249	271	267	309	311	409	506	508	512	526
Receipts of firm power from:											
Other provinces			1 1		1 1	1 1	1 1	1 8	, ,		1 1
Total receipts		1	,		,	ı	,	'	,	,	1
Deliveries of firm power to:											
Other provinces		9 1	∞ I	7	14	13	13	1.4	14	14	14
	'	9	00	7	14	13	13	14	14	14	14
. Total net capability (6 + 9 - 12)	200	243	263	260	295	298	396	492	767	498	512
Peak loads:	. 182	222	231	231	245	242	294	347	394	405	416
5. Indicated shortages		222	231	231	245	242	294	347	394	405	416
7. Firm power peak load on province (12 + 16)	182	228	239	238	259	255	307	361	408	419	430
Indicated reserve:											
(8. Indicated reserve (13 - 16)	18	21	32	29	20	56	102	145	100	93	96

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14. 15.

TABLE 1A. Capability and Firm Power Peak Load Requirements

Prin	Prince Edward Island	TABLE 1A.		Capability and Firm Power Peak Load Requirements	ower Peak	Load Requis	rements					
					Actual					Fore	Forecast	
		1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
						thousan	thousands of kilowatts	watts				
	Capability:											
	Net generating capability:											
1.	Hydro-electric Steam - Conventional)	٠		¢	·	r	(32	32	52	52	52	52
. 4	Nuclear) Internal combustion)	18	25	26	25	38		1 10		1 ~	, _	
5. 4	Gas turbine)	C	i c	30	20	o c	- 1	1 10	1 0	r c	1 0	1 0
ò	lotal net generating capability	81	67	97	67	38	31	3/	99	96	96	99
	Receipts of firm power from:											
7.8	Other provinces	1 1		1 1	1 1	, ,		1 1			1 1	. ,
6	Total receipts	*	ŧ	f		1	ě	ŧ	4	•	t	1
	Deliveries of firm power to:											
10.	Other provinces	1 8	1 1		, ,	1 1	, ,	1 1	a 0	1 1		, ,
12.	Total deliveries	t		ı	1	ŧ		1	1	,		1
13.	Total net capability (6 + 9 - 12)	18	25	26	25	38	37	37	59	59	59	59
	Peak loads:											
14.	Firm power peak load within province Indicated shortages	00 1	14	16	19	21	24	25	28	30	33	36
16.	Total indicated firm power peak load within province (14 + 15)	œ	14	16	19	21	24	25	58	30	33	36
17.	Firm power peak load on province (12 + 16)	00	14	16	19	21	24	25	28	30	33	36
	Indicated reserve:											
18.	Indicated reserve (13 - 16)	10	11	10	9	17	13	12	31.	29	26	23

TABLE 1A, Capability and Firm Power Peak Load Requirements

Nova Scotia

					Actual					Fore	Forecast	
		1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
						thousan	thousands of kilowatts	watts				
	Capability:											
	Net generating capability:											
12.5	Hydro-electric	114	126	127	126	132	141 (365	141 378	141 378	141 378	141 473	141 473
4.0	Internal combustion) Gas turbine)	134	289	284	367	367	,	7	7 1	7 1	- 2	7 -
9	Total net generating capability	248	415	411	493	667	508	521	521	521	616	616
	Receipts of firm power from:											
. %	Other provinces	1 1	1 1	1 1		1 1		1 1	1 1		1 1	1 1
9.	Total receipts	,	t	ı	1		,	,	1	,	1	'
	Deliveries of firm power to:											
10.	Other provinces	- 2	7 1	en :	m .	en 1	- 1	٠ ٠	1 -		' '	1 1
12.	Total deliveries	2	2	3	е	9	1	1	1		,	•
13.	Total net capability (6 + 9 - 12)	246	413	408	490	967	507	520	520	521	616	616
	Peak loads:											
14.	Firm power peak load within province Indicated shortages	185	322	335	330	356	347	388	607	431	458	484
16.	Total indicated firm power peak load within province (14 + 15)	187	322	335	330	356	347	388	607	431	458	787
17.	Firm power peak load on province (12 + 16)	189	324	338	333	359	348	389	410	431	458	484
	Indicated reserve:											
18.	Indicated reserve (13 - 16)	59	91	73	160	140	160	132	111	90	158	132

New Brunswick

TABLE 1A. Capability and Firm Power Peak Load Requirements

					Actual					Forecast	cast	
		1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
						thousan	thousands of kilowatts	watts				
8	Capability:											
	Net generating capability:											
	Hydro-electric Steam - Conventional) Nuclear Nuclear	4,587 ^r	6,406	6,992	7,612	8,658	8,628	8,830	9,065	9,323 191	9,830	9,957
	Internal combustion) Gas turbine	26	55	19	69	106	36	12 36	12 36	12 36	12 36	12 36
	Total net generating capability	4,613 ^r	6,461	7,053	7,681	8,764	8,738	8,919	9,154	9,562	10,219	10,346
	Receipts of firm power from:											
	Other provinces	el 1	7	6 +	6 +	16	19	15	16	16	16	16
	Total receipts	1	7	6	6	16	21	17	18	18	18	18
	Deliveries of firm power to:											
	Other provinces	735	694	673	696	698	969	4 ₄	669 4	700	701	704
	Total deliveries	791	750	730	753	755	734	701	703	704	705	708
	Total net capability (6 + 9 - 12)	3,823 [£]	5,718	6,332	6,937	8,025	8,025	8,235	8,469	8,876	9,532	9,656
o)	Peak loads:											
	Firm power peak load within province	3,462	5,256	5,375	5,466	5,871	6,258	6,370	6,836	7,249	7,750	8,244
	Total indicated firm power peak load within province (14 + 15)	3,462	5,258	5,375	5,466	5,871	6,258	6,370	6,836	7,249	7,750	8,244
	Firm power peak load on province (12 + 16)	4,253	6,008	6,105	6,219	6,626	6,992	7,071	7,539	7,953	8,455	8,952
5	Indicated reserve:	1										
	Indicated reserve (13 - 16)	361 ^F	460	957	1,471	2,154	1,767	.1,865	1,633	1,627	1,782	1,412

TABLE 1A. Capability and Firm Power Peak Load Requirements

Ontario		TABLE 1A. C.	apability	Capability and Firm Power Peak Load Requirements	ower Peak	Load Requi	rements					
					Actual					Forecast	cast	
		1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
						thousan	thousands of kilowatts	owatts				
)	Capability:											
	Net generating capability:											
1.2.	Hydro-electric	2,476	4,145	5,081	5,467	5,464	5,292	5,285	5,536	5,536	5,661	5,793
. 4.0	Internal combustion)	348	787	800	808	1,186	· ::	12	1 61	1 0/1	10	111
. 6	Total net generating capability	2,824	4,932	5,881	6,275	6,650	6,858	7,223	8,185	8,467	8,793	9,208
	Receipts of firm power from:											
7.8	Other provinces	744	705	899	692	769	569	692	769	692	693	769
9.	Total receipts	744	705	899	692	769	695	692	769	692	693	769
	Deliveries of firm power to:											
10.	Other provinces	1 85	1 86	1 86	86	86	86	89	2 89	36	36	36
12.	Total deliveries	986	87	87	88	80	91	91	91	38	38	38
13.	Total net capability (6 + 9 - 12)	3,482	5,550	6,462	6,879	7,256	7,462	7,824	8,788	9,121	9,448	9,864
	Peak loads;											
14.		3,292 319	5,369	5,794	6,154	6,391	6,615	6,913	7,376	7,789	8,219	8,688
16.	Total indicated firm power peak load within province (14 + 15)	3,611	5,369	5,794	6,154	6,391	6,615	6,913	7,376	7,789	8,219	8,688
17.	Firm power peak load on province (12 + 16)	3,697	5,456	5,881	6,242	6,479	6,706	7,004	7,467	7,827	8,257	8,726
	Indicated reserve:											
18.	Indicated reserve (13 - 16)	- 129	181	899	725	865	847	911	1,412	1,332	1,229	1,176

TABLE 1A. Capability and Firm Power Peak Load Requirements

Manitoba

					Actual					Forecast	ast	
		1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
9	Capability:					thousar	thousands of kilowatts	watts				
	Net generating capability:											
1.	Hydro-electric Steam - Conventional)	413	561	566	995	701	735 (166	735 291	735	945 291	1,050	1,050
e, 4; v,	Nuclear) Internal combustion) Gas turbine	10	78	168	168	231	. 4 1		1 00 1		,	6
. 0	Total net generating capability	423	639	734	734	932	905	1,033	1,034	1,244	1,349	1,350
	Receipts of firm power from:											
7.8	Other provinces	77	69	89	72	986	83	87	138	80 1	00 I	88
.6	Total receipts	77	69	89	72	98	83	87	138	80	80	88
	Deliveries of firm power to:											
10.	Other provinces	6 1	14		1 1	, ,	, ,		1 1		- ,	
12.	Total deliveries	6	14	t	,	•	•	1	1	*	1	'
13,	Total net capability (6 + 9 - 12)	491	769	802	806	1,018	988	1,120	1,172	1,332	1,437	1,438
-1									;	;		6
14.	Firm power peak load within province	454	809	949	069	772	849	907	943	984	1,029	1,080
16.	Total indicated firm power peak load within province (14 + 15)	454	809	949	069	772	849	907	943	486	1,029	1,080
17.	Firm power peak load on province (12 + 16)	463	622	949	069	772	849	907	943	984	1,029	1,080
a	Indicated reserve:	22	Q O	156	116	246	130	213	229	348	408	358
10.		10	8		211							

TABLE 1A. Capability and Firm Power Peak Load Requirements

Sask	Saskatchewan	TABLE 1A. C	apability	Capability and Firm Power Peak Load Requirements	ower Peak	Load Requi	rements					
	,				Actual					Forecast	cast	
		1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
,	Capability:					thousan	thousands of kilowatts	watts				
	Net generating capability:											
- 6.6	Hydro-electric	SS .	87	87	80	66	107	107 575	246	315	315 523	315 523
n din	Nuclear) Internal combustion) Gas turbine)	160	376	451	583	653	35	37	36 33	335	33 3	1 K K
9	Total net generating capability	245	463	538	671	752	757	752	808	876	906	906
	Receipts of firm power from:											
7.8	Other provinces	, ,		↔ :	П.	٦.		1 1	1.1			
9.	Total receipts	,		1	1	1	,	,	,		,	
	Deliveries of firm power to:											
10.	Other provinces	77	69	68	72	86	88	87	138	& P	∞ I	80 1
12.	Total deliveries	77	69	68	72	86	88	87	138	88	88	88
13.	Total net capability (6 + 9 - 12)	. 168	. 394	471	009	299	699	665	670	788	818	818
14.	reak loads: Firm power peak load within province Indicated shortages	127	299	353	377	418	466	497	535	579	639	694
16.	Total indicated firm power peak load within province (14 + 15)	127	299	353	377	418	466	764	535	579	639	694
17.	Firm power peak load on province (12 + 16)	204	368	421	677	504	554	584	673	299	727	782
18.	Indicated reserve: Indicated reserve (13 - 16)	41	95	118	223	249	203	168	135	209	179	124
					2 1	(L	200	2	200	407	717	2.24

TABLE 1A. Capability and Firm Power Peak Load Requirements

Alberta

				Wrena i							
1	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
					thousar	thousands of kilowatts	Watts				
Capability:											
Net generating capability:											
Hydro-electric Steam - Conventional)	162	238	238	238	318	327 (498	327	327	477	477	627
Nuclear) Internal combustion) Gas turbine — — — — — — — — — — — — — — — — — — —	109	350	496	530	607	(28 (100	33	34	34	36	38
Total net generating capability	271	588	734	768	925	953	1,133	1,205	1,387	1,389	1,631
Receipts of firm power from:											
Other provinces		7 -	4 1	en 1	က၊	1 1	1 1	1 (, ,	' '
Total receipts	,	7	7	3	3		,	,	•	•	•
Deliveries of firm power to:											
Other provinces	ıΩı	, ,	⊣ .	H 1	- 1	5 1	4 -	9	7	7	7
Total deliveries	5	,	1	1	1	2	7	9	7	7	7
Total net capability (6 + 9 - 12)	266	592	737	770	927	876	1,129	1,199	1,380	1,382	1,624
Firm power peak load within province	220	476	580	649	714	836	882	696	1,063	1,160	1,275
Total indicated firm power peak load within province (14 + 15)	220	924	580	649	714	836	882	696	1,063	1,160	1,275
Firm power peak load on province (12 + 16)	225	9/4	581	650	715	841	886	975	1,070	1,167	1,282
Indicated reserve:											
Indicated reserve (13 - 16)	94	116	157	121	213	112	247	230	317	222	349

TABLE 1A. Capability and Firm Power Peak Load Requirements

British Columbia

					Actual					Forecast	ast	
		1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
	Gapability:					thousand	thousands of kilowatts	watts				
	Net generating capability:											
1:	Hydro-electric Steam - Conventional)	806	2,187	2,356	2,524	2,659	2,672 (117	2,599	2,723	2,723	2,727	2,817 576
e, 4, a	Nuclear) Internal combustion) Cas turbine	107	163	212	353	369	(109 (172	112	108	114	114	114
	Total net generating capability	1,015	2,350	2,568	2,877	3,028	3,070	3,307	3,432	3,592	3,596	3,686
	Receipts of firm power from:											
7.		20 1	1 1	1 1	1 1		ıΩι	4 -	9 1	7	6 1	10
. 6		5	,	(1	1	5	4	9	7	6	10
	Deliveries of firm power to:											
10.	Other provinces	30	4 -	4 1	en ۱	m F	1 1	1 1	, ,		, ,	
12.		30	7	4	67	е .	•	-	•	1	ı	1
13,	Total net capability (6 + 9 - 12)	066	2,346	2,564	2,874	3,025	3,075	3,311	3,438	3,599	3,605	3,696
	Peak loads:					1	\ \ \	7	i c	6	777 6	0 0
14.	Firm power peak load within province Indicated shortages	861	1,821	1,935	1,963	2,123	2,368	2,31/	2,504	T00°7	2,1/1	4 4
16.		861	1,821	1,935	1,963	2,123	2,368	2,317	2,504	2,661	2,778	2,962
17.	. Firm power peak load on province (12 + 16)	891	1,825	1,939	1,966	2,126	2,368	2,317	2,504	2,661	2,778	2,962
18.	Indicated reserve: Indicated reserve (13 - 16)	129	525	629	911	905	707	766	934	938	827	734

TABLE 1A. Capability and Firm Power Peak Load Requirements

Yukon and Northwest Territories

					Actual					Forecast	ast	
		1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
	Capability:					thousan	thousands of kilowatts	watts				
	Net generating capability:											
	Hydro-electric	21	25	37	37	474	4 1)	44	45	45	46	46
5.	Interna] Gas turk	ı	1	m	4	11		01	10	10	10	10
. 9	Total net generating capability	21	26	40	41	55	55	55	56	57	58	58
	Receipts of firm power from:											
7.8	Other provinces	, ,		٠ ،	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
.6	Total receipts	1	•	٠	ı	1		,	,	,	ı	
	Deliveries of firm power to:											
10.	Other provinces	1 1		. ,		, ,		1 1	1 1		1 1	1 1
12.	Total deliveries	1	'	1	1	ŧ	•	,	•	1	,	1
13.	Total net capability (6 + 9 - 12)	21	26	40	41	55	55	55	56	57	58	58
-1	Peak loads:											
14.	Firm power peak load within province	14	19	30	31	34	29	32	33	33	34	35
16.	Total indicated firm power peak load within province (14 + 15)	14	19	30	31	34	29	32	33	33	34	35
17.	Firm power peak load on province (12 + 16)	14	19	30	31	34	29	32	33	33	34	35
18.	Indicated reserve:	^	7	10	10	21	26	23	23	24	24	23

TABLE 1B. Energy Supply and Requirements

Canada

										Forecast	4	
					Actual							
		1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
					B	millions of kilowatt-hours	kilowatt-}	nours				
-	Net generation by:											
ij	Hydro-electric	:	82,973	90,250	96,517	105,770	103,692	103,695	:	:	:	:
2.	Steam - Conventional)						(8,822	12,543	:	:	:	: :
3.	Nuclear) Internal combustion)	•	7,288	6,507	7,339	8,271	609	514	: :	: :	: :	: :
5.	Gas turbine) Total net generation	:	90,261	96,757	103,856.	114,041	113,271	117,031				:
, %	(a) Firm: Other provinces United States	•		: :	::	::	. 00			24	25	26
9.	(b) Secondary: Other provinces United States	: :		:	: :	: :	1,392	2,764				
11.		:	831	244	515	367	1,400	2,786		:	:	:
	Deliveries of energy to:											
12.	(a) Fitm: Other provinces United States	1,418	1,172	1,264	1,253	1,283	1,122	817	828	587	541	***
14.	(b) Secondary: Other provinces United States	::	3,613	2,883	3,331	4,228	3,058	3,267			::	: :
16.	Total deliveries of energy	:	4,785	4,147	4,584	5,511	4,180	4,084	:	:	:	:
17.	Total energy available (6 + 11 = 16)	:	86,307	92,854	787 666	108,897	110,491	115,733	:	:	•	;
00	8. Secondary energy delivered within Canada	:	2,540	5,615	5,684	6,615	5,415	069°5	:	•	:	:
19.	19. Firm energy available within Canada (17 - 18)	55,516	83,767	87,239	94,103	102,282	105,076	111,043	117,047	125,667	133,383	141,344
20.	20. Indicated shortage	312	554	1	•	•	1	1	1	1	1	•
21.	21. Firm energy requirement within Canada (19 + 20)	55,828	84,321	87,239	94,103	102,282	105,076	111,043	117,047	125,667	125,667 133,383	141,344
22.	22. Firm energy requirement on Canada (12 + 13 + 21)	57,246	85,493	88,503	95,356	103,565	106,198	116,622	122,938	131,364	139,017	146,899

TABLE 1B. Energy Supply and Requirements

Newfoundland

					Actual					Forecast	ast	
		1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
	Net ceneration by:					millions of kilowatt-hours	kilowatt-	hours				
1.		:	1,305	1,330	1,320	1,403	1,322	1,556	:	:	:	:
3.	Steam - Conventional) Nuclear				;	1	(116	101	: :	::	::	::
4.	Internal combustion)	:	20	40	54	76	10	0 1	::	::	::	: :
.9	Total net generation	:	1,355	1,370	1,374	1,479	1,448	1,666	:	:	:	:
	Receipts of energy from:											
7.8	(a) Firm: Other provinces United States	::	::	::	::	::		1 1	1 1	1-1	1 1	1 1
9.	(b) Secondary: Other provinces United States	: :	: :	::	::	::	1 1	1 1	::	::	::	::
11.	Total receipts of energy	:	'	6	1	'	,	1	:	:	:	:
	Deliveries of energy to:											
12.	(a) Firm: Other provinces United States	1 1	949	777	<u>e</u> .	649	80	81	833	833	83	83
14.	(b) Secondary; Other provinces United States	::	::	2 :	18	36	നം	8 1	::	::	::	::
16.	Total deliveries of energy	:	95	97	51	85	83	81	:	:		:
17.	Total energy available (6 + 11 - 16)	:	1,309	1,333	1,323	1,394	1,365	1,585	:			:
18.	18. Secondary energy delivered within province	:	119	155	108	74	4	112	:	:	:	:
19.	19. Firm energy available within province (17 - 18)	1,040	1,190	1,178	1,215	1,320	1,361	1,473	1,742	2,238	2,459	2,524
20.	20. Indicated shortage	1	1	1	ı	1	ı	8	1	1	1	1
21.	21. Firm energy requirement within province (19 + 20)	1,040	1,190	1,178	1,215	1,320	1,361	1,473	1,742	2,238	2,459	2,524
22.	22. Firm energy requirement on province (12 + 13 + 21)	1,040	1,236	1,222	1,248	1,369	1,441	1,554	1,825	2,321	2,542	2,607

TABLE 1B. Energy Supply and Requirements

Prfn	Prince Edward Island	TABLE	1B.	sy Supply a	Energy Supply and Requirements	ments						
					Actual					Forecast	st	
		1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
					B	millions of kilowatt-hours	kilowatt-	hours				
	Net generation by:											
1.	Hydro-electric	:	1	ŧ	•		ı	1	:	:	:	•
2.	Steam -						(81	93	: :			: :
i it	Internal combustion)	*	57	63	7.1	79	,	00 (::	::	::	· · ·
. 9		:	57	63	17	62 .	88	101	:	:		:
	Receipts of energy from:											
. %	(a) Firm: Other provinces United States	::	1 1	1 1	1 (1 1		1.1		8 - E	1 1	į į
9.	(b) Secondary: Other provinces United States	::	1 1	(1	1 (1 1	0 8	1 1				::
11.		•	,	,	,	1		1	:	:	•	•
	Deliveries of energy to:											
12.	(a) Firm: Other provinces	4 4		1-1	1 1	1.1	1-1	1 1		1 1	1 1	1 1
14.	(b) Secondary: Other provinces	1 1	4 1	1 1	1 1		1 1	1 1				
16.	Total deliveries of energy	'	1		ŧ	٠	8	,		•	:	
17.	. Total energy available (6 + 11 - 16)	•	57	63	71	79	88	101	:	:	*	
18.	18. Secondary energy delivered within province		ŧ	ŧ	ŧ	1		ı	*	•	*	:
19.	19. Firm energy available within province (17 - 18)	34	57	63	7.1	79	88	101	115	125	149	160
20.	20. Indicated shortage	1	•	1	1		1	1	1	1	1	ı
21.	21. Firm energy requirement within province (19 + 20)	34	57	63	7.1	79	80	101	115	125	149	160
22	22. Firm energy requirement on province $(12 + 13 + 21)$	34	57	63	7.1	79	80	101	115	125	149	160
1												

TABLE 1B. Energy Supply and Requirements

Nova Scotia

					Actual					Forecast	ist	
		1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
					E	illions of	millions of kilowatt-hours	hours				
	Net generation by:											
1.	Hydro-electric	:	514	651	929	632	549	710	:	:	:	:
2.	Steam - Conventional)						(1,301	1,300	:	:	:	:
4	Internal	:	996	911	996	1,162	,	,	: :	• •	: :	: :
5.							· _	1	:	:	•	:
. 9	Total net generation	:	1,480	1,562	1,640	1,794	1,850	2,010	:	:	:	:
	Receipts of energy from:											
7.	(a) F1	:	•	9	•		16	1	•	•	1	•
o		:	:	:	:	:		,	1			1
9.	(b) Secondary: Other provinces United States	::		::	::	::	1 1	29	::	::	::	::
11.	Total receipts of energy	:	:	:	:	:	16	67	:	:	:	:
	Deliveries of energy to:											
12.	(a) Firm: Other provinces	1 1	σ,	10	14	80	12	۲ ،	41	1 1	t 1	1 1
14.	(b) Secondary: Other provinces United States		1 1	8 1		1 1	79	101	• •	::	::	::
16.	Total deliveries of energy	8	6	10	14	80	91	108	i		:	:
17.	Total energy available (6 + 11 - 16)	:	1,471	1,552	1,626	1,714	1,775	1,969	:	:	:	:
18.	18. Secondary energy delivered within province	•	1	1	•	1	1	4	o 0	:	:	:
19.	19. Firm energy available within province (17 - 18)	1,027	1,471	1,552	1,626	1,714	1,775	1,965	2,090	2,218	2,349	2,490
20.	20. Indicated shortage	•	٠	٠	1	ı	٠	ı	1	ı	ı	ı
21.	21. Firm energy requirement within province (19 + 20)	1,027	1,471	1,552	1,626	1,714	1,775	1,965	2,090	2,218	2,349	2,490
22.	22. Firm energy requirement on province $(12 + 13 + 21)$	1,033	1,480	1,562	1,640	1,794	1,787	1,972	2,094	2,218	2,349	2,490

TABLE 1B. Energy Supply and Requirements

New]	New Brunswick	TABLE	1B. Energy	y Supply a	TABLE 1B. Energy Supply and Requirements	pents						
					Actual					Forecast	38¢	
		1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
					THE STATE OF THE S	millions of kilowatt-hours	kilowatt-	hours				
	Net generation by:											
1:	Hydro-electric	:	909	1,066	975	887	766	1,191	•	0 0	:	
2.	Steam -						0/8)	895	: :	0 0		::
n <	Nuclear)	:	755	478	692	842	18	2		:		:
÷ ivi							-	1				*
.9	Total net generation	*	1,361	1,544	1,667	1,729	1,882	2,088		:	:	:
	Receipts of energy from:											
7.	(a) Firm: Other provinces United States	::	::	::	::	::	31	28	27	24	26 16	27 16
9.	(b) Secondary: Other provinces United States	::	• •	::		::	79	101		: :	0 0 0 0 0 0	::
11.		:	28	26	32	111	124	146	i	:	:	
	Deliveries of energy to:											
12.	(a) Firm: Other provinces United States	41	29	- 63	51	- 22	125	166	165	191	213	119
14.	(b) Secondary: Other provinces United States	•	12	1 80	109	107	16 78	67	• •	• •	* * * * * * * * * * * * * * * * * * *	• • •
16.	Total deliveries of energy	:	41	151	160	165	219	317	•	:		:
17.	Total energy available (6 + 11 - 16)	•	1,348	1,419	1,539	1,675	1,787	1,917	:	:	:	:
18.	18. Secondary energy delivered within province	:	1	2	7	1	2	N		:	:	:
19.	19. Firm energy available within province (17 - 18)	1,002	1,347	1,417	1,537	1,674	1,782	1,912	2,111	2,556	2,714	3,097
20.	20. Indicated shortage	1	t	1		ı	1	1	1	ı	1	1
21.	21. Firm energy requirement within province (19 + 20)	1,002	1,347	1,417	1,537	1,674	1,782	1,912	2,111	2,556	2,714	3,097
22.	22. Firm energy requirement on province (12 + 13 + 21)	1,043	1,376	1,480	1,588	1,732	1,907	2,078	2,276	2,747	2,927	3,216

TABLE 1B. Energy Supply and Requirements

1957 1958 1959 1960 1961 1962 37,802 43,340 44,418 50,000 49,432 49,799 37,987 43,529 44,627 50,273 49,726 50,129						Actual					Forecast	ast	
National Composition by: Total net generation by: National Composition by: National Compositio			1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
Steam - Convention by: Indicate a stocker of energy variable within province 13,780 44,418 50,000 49,422 49,792								of kilowat	r-hours				
Secondary energy delivered within province (1 + 15) 15 25 27 27 27 27 27 27 2		Net generation by:		37 RO2	078 87	44 418	20 000	787 67	60.700				
Secretar Combustion Stream - Conventional Stream - Str		hydro-electric	•	200,10	240,04	074 644	200,000	13,154	473173	•	:	:	:
Secretize of energy from: (a) From Coher provinces Coher province Co		Steam - Conventional) Nuclear)						(276	288	::	: :	::	::
(a) Firm: (b) Secondary: from teed provinces of energy available (6 + 11 - 16) (c) Secondary energy available within province (17 - 18) (d) Firm: (e) Firm: (h) Secondary: (e) Firm: (h) Secondary: (h)	4.4	mbustion	:	185	189	507	2/3	117	13		::		• •
(a) First:		Total net generation	0	37,987	43,529	44,627	50,273	49,726	50,129	:	:	:	:
(a) Firm: Other provinces (b) Secondary: Other provinces (c) Firm: (c) Firm: Other provinces (d) Firm: Total receipts of energy (e) Firm: Other provinces (b) Secondary: Other provinces (c) Firm: Other provinces (c) Firm: Other provinces (d) Firm: Other provinces (e) Firm: Other provinces (f) Secondary: Other provinces (g) Firm: Other province (h) Firm: Other p	-	Receipts of energy from:											
(b) Secondary: Other provinces Other provinces Other provinces		or provinces	::	::	::	::	::	87	110	140	06	90	06
Condary energy available (if -11 - 16) Condary energy ratio (if -11 - 16) Condary energy available within province (ij - 12) Condary energy ratio (ij - 12)		Secondary: Other provinces United States	::	::	::	::	• •	16	1 1	::	•	::	::
(a) Film of provinces (b) Secondary energy available (f + 11 - 16) Secondary energy available within province (17 - 18) Secondary energy requirement within province (19 + 20) Secondary energy requirement on province (10 + 13) Secondary energy requirement on province (19 + 20) Secondary energy requirement on province (19 + 13 + 21) Secondary energy requirement on province (19 + 31) Secondary energy requirement on province (Total receipts of energy	:	65	61	83	103	110	117	:	:	i	:
(a) Firm: Other provinces United States (b) Secondary: Other provinces (c) Secondary energy available (6 + 11 - 16) Secondary energy available within province (17 - 18). Secondary energy requirement within province (12 + 13 + 21) Firm energy requirement on province (12 + 13 + 21) Secondary energy requirement on province (12 + 13 + 21) Other provinces (4,456	1	Deliveries of energy to:											
(b) Secondary: Other provinces United States Total deliveries of energy available (6 + 11 - 16) Secondary energy delivered within province (17 - 18) This energy available within province (19 + 20) This energy requirement within province (19 + 20) This energy requirement within province (19 + 20) This energy available within province (19 + 20) This energy available within province (19 + 20) This energy available within province (19 + 20) This energy requirement within province (19 + 20) This energy requirement on province (19 + 20) This energy energy requirement on province (19 + 20) This energy ener		er provinces	4,456	4,075	4,205	4,211	4,193	4,207	3,964	4,280	4,303	4,313	4,329
Total deliveries of energy		(b) Secondary: Other provinces United States	::	876	1,785	1,415	1,723	1,649	1,963	::	::	::	::
32,552 37,074 38,538 43,902 43,573 44,011 1,716 4,732 4,503 5,350 4,551 3,622 23,189 30,836 32,342 34,035 38,552 39,022 40,389 41,101 44,023			:	5,500	6,516	6,172	6,474	6,263	6,235	:	:	:	:
. 1,716 4,732 4,503 5,350 4,551 3,622		lable (6 + 11	:	32,552	37,074	38,538	43,902	43,573	44,011	:	:		:
23,189 30,836 32,342 34,035 38,552 39,022 40,389 41,101 44,023 215 540 - - - - - - 23,404 31,376 32,342 34,035 38,552 39,022 40,389 41,101 44,023 1 28,350 35,936 37,037 38,738 43,241 43,582 44,367 45,396 48,341		Secondary energy delivered within province	:	1,716	4,732	4,503	5,350	4,551	3,622	:	:	:	:
23,404 31,376 32,342 34,035 38,552 39,022 40,389 41,101 44,023 28,350 35,936 37,037 38,738 43,241 43,582 44,367 45,396 48,341	-	province (17 - 18)	23,189	30,836	32,342	34,035	38,552	39,022	40,389	41,101	44,023	47,081	50,117
23,404 31,376 32,342 34,035 38,552 39,022 40,389 41,101 44,023 28,350 35,936 37,037 38,738 43,241 43,582 44,367 45,396 48,341		Indicated shortage	215	240	1	1	1	1	1	1	•	1	t
+13 +21) 28,350 35,936 37,037 38,738 43,241 43,582 44,367 45,396 48,341		Firm energy requirement within province (19 + 20)	23,404	31,376	32,342	34,035	38,552	39,022	40,389	41,101	44,023	47,081	50,117
	-:	Firm energy requirement on province (12 + 13 + 21)	28,350	35,936	37,037	38,738	43,241	43,582	44,367	45,396	48,341	51,410	54,463

TABLE 1B. Energy Supply and Requirements

1951 1957 1958 1959	Ontario	to		TABLE	1B. Energ	y Supply a	TABLE 1B. Energy Supply and Requirements	ements						
1951 1952 1956 1956 1956 1957 1958 1959 1960 1951 1952 1953 1954 1955 1958							Actual					Forec	ast	
### ### ##############################			ı	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
New Teach Content Company 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 825 1,197 946 1,197 946 1,197 946 1,197 946 1,197 946 1,197 946 1,197 946 1,197 946 1,197 946 1,197 946 1,197 946 1,197 946 1,197								millions o	f kilowatt	-hours				
Steam - Conventional) Steam - Conventional Steam - Conve		Net gen Hydro	eration by:	:	27,894	27,942	32,301	34,870	33,654	30,872	•	:	:	:
Acceptant or generate Acceptant Acce	3.5	Steam	- Conventional)						(1,187	4,335	: :	• •		::
Secretar of energy from: (a) Filts: Color province	4.70	Inter Gas t	nal combustion))	:	2,089	1,197	976	822	31	29	• •	• •	0 0	
(a) First United States (b) Secondary: (c) Secondary energy deliverde within province (c) First United States (d) First United States (e) First United States (f) Secondary: (e) First United States (f) Secondary: (e) First United States (f) Secondary: (g) Secondary: (g) Secondary: (g) First United States (g) Secondary: (g) First United States (g) First United States (g) First United States (h) Secondary: (g) Secondary: (h) Secondary energy deliverde within province (g) Sign States (h) Secondary energy deliverde within province (g) Sign States (h) Secondary energy available within province (g) Sign States (g) Sign States (h) Secondary (h) Secondary (h) Secondary (h) Sign States (h) Sign	6.	Tot		:	29,983	29,139	33,247	35,692	34,872	35,259	•	•	:	:
(a) First Deliveride States (b) Secondary energy available (6 + 11 - 16) (7) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2		Receipt	Ls of energy from:											
(b) Secondary: Other provinces Total receipts of energy to: (a) Figure States (b) Secondary: (c) Figure States (b) Secondary: (b) Secondary: (c) Figure States (b) Secondary: (c) Figure States (c) Figure States (d) Figure States (e) Figure States (e) Figure States (f) Secondary: (e) Figure States (f) Secondary: (e) Figure States (f) Secondary: (f) Secondary: (g) Seco	7.	(a) 1	firm: Other provinces United States	::	::	::	::	: :	4,188	3,943	4,262	4,289	4,292	4,307
Contact receipts of energy to: (a) Firm: (b) Secondary: (b) Secondary energy available (6 + 11 - 16) Secondary energy available within province (17 - 18) Secondary energy delivered within province (19 + 20) Secondary energy requirement within province (19 + 20) Secondary energy requirement on province (19 + 20) Secondary energy equirement on province (19 + 20) Secondary energy	9.	(2)	vincesates	: :	: :	•	::	e 6	1,649	2,009		::		::
(a) Fitu: (a) Fitu: (b) Secondary: (b) Secondary: (b) Secondary energy to: (b) Secondary: (c) Secondary: (d) Other provinces (e) Secondary: (b) Secondary: (c) Secondary: (d) Secondary: (e) Secondary: (f) Secondary: (f) Secondary: (g) Secondary: (h) Secon	11.		Total receipts of energy	:	5,375	6,232	960,9	6,182	7,199	8,656		:	:	:
(b) Secondary energy available (b + 11 - 16) Secondary energy available within province (12 + 13 + 20) Secondary energy requirement within province (12 + 13 + 20) Secondary energy requirement within province (12 + 13 + 21) Secondary energy requirement on province (12 + 13 + 21) Secondary energy requirement on province (12 + 13 + 21) Secondary energy requirement on province (12 + 13 + 21) Secondary energy requirement on province (12 + 13 + 21) Secondary energy requirement on province (12 + 13 + 21) Secondary energy requirement on province (12 + 13 + 21) Secondary energy requirement on province (12 + 13 + 21) Secondary energy requirement on province (12 + 13 + 21) Secondary energy requirement on province (12 + 13 + 21) Secondary energy requirement on province (12 + 13 + 21) Secondary energy requirement on province (12 + 13 + 21) Secondary energy requirement on province (12 + 13 + 21) Secondary energy requirement on province (12 + 13 + 21) Secondary energy requirement on province (12 + 13 + 21) Secondary energy requirement on province (12 + 13 + 21) Secondary energy en		Delive	ries of energy to:											
(b) Secondary: Other provinces United States United States United States United States United States Total deliveries of energy Total energy available (6 + 11 - 16) 31,154 31,154 31,863 35,389 36,967 38,238 40,177 11 - 16) <	12.		er provinces	3 703	658	711	710	727	642	635	23	379	310	310
Secondary energy available (6 + 11 - 16) 3,508 3,538 4,907 3,833 3,738	14.		vincesates	::	3,524	46 2,746	83 3,154	131	275	221			::	::
Secondary energy available (6 + 11 - 16) 31,154 31,863 35,389 36,967 38,238 40,177 Etrm energy available within province (17 - 18) 194 395 485 585 511 546 Indicated shortage Irra energy requirement within province (19 + 20) 20,492 30,960 31,468 34,904 36,382 37,727 39,631 42,399 45,059 47,462 Firm energy requirement on province (12 + 13 + 21) 20,492 30,960 31,468 34,904 36,382 37,727 39,631 42,399 45,059 47,462	16.			:	4,204	3,508	3,952	4,907	3,833	3,738	•	8 0	*	:
	17.		lable (6 + 11 -	:	31,154	31,863	35,389	36,967	38,238	40,177	:	:	•	:
18) 20,395 30,960 31,468 34,904 36,382 37,727 39,631 42,399 45,059 47,462 3+20 20,492 30,960 31,468 34,904 36,382 37,727 39,631 42,399 45,059 47,462 3+20 20,492 30,960 31,622 32,184 35,619 37,115 38,376 40,273 43,068 45,462 47,797	18.	Second	dary energy delivered within province	:	194	395	485	585	511	546	:	:	:	:
20,492 30,960 31,468 34,904 36,382 37,727 39,631 42,399 45,059 47,462 21,198 31,622 32,184 35,619 37,115 38,376 40,273 43,068 45,462 47,797	19.	Firm		20,395	30,960	31,468	34,904	36,382	37,727	39,631	42,399	45,059	47,462	50,153
20,492 30,960 31,468 34,904 36,382 37,727 39,631 42,399 45,059 47,462 21,198 31,622 32,184 35,619 37,115 38,376 40,273 43,068 45,462 47,797	20.	Indica	ated shortage	97	1	1	1		ı	•	1	1	1	1
(12 + 13 + 21) 21,198 31,622 32,184 35,619 37,115 38,376 40,273 43,068 45,462 47,797	21.	Firm	energy requirement within province (19 + 20)	20,492	30,960	31,468	34,904	36,382	37,727	39,631	42,399	45,059	47,462	50,153
	22.	Firm	energy requirement on province (12 + 13 + 21)	21,198	31,622	32,184	35,619	37,115	38,376	40,273	43,068	45,462	47,797	50,489

TABLE 1B. Energy Supply and Requirements

Man	Manitoba	TABI	TABLE 1B. Ener	Energy Supply and Requirements	and Requir	ements						
	,				Actual					Forecast	ast	
		1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
						millions of	f kilowatt-hours	hours				
	Net generation by:											
i.	Hydro-electric	:	3,333	3,082	3,582	3,735	3,591	4,220	:	:	:	:
3.5	Steam - Conventional) Nuclear)						(238	120			: :	: :
4.0	Internal combustion)	:	20	131	51	75		12		:	•	÷
9	Total net generation	:	3,338	3.213	3,633	3,810	3,840	4,352	:	:		
	Receipts of energy from:											
7.	(a) Firm: Other provinces United States	::	::	::	::	::	623	249	657	989	661	661
9.	(b) Secondary: Other provinces United States	: :	::	: :	: :	: :	301	199	• • • •	: :	•	:
11.	Total receipts of energy	:	571	620	652	739	924	846				:
	Deliveries of energy to:											
12.	(a) Firm: Other provinces United States	79	136	8 1	1 1		61	29		1 1	1 1	1 1
14. 15.	(b) Secondary: Other provinces United States	::	18	43	ო I :	4 -	⊅ . 1	97	::	::	::	::
16.	Total deliveries of energy	:	154	43	3	7	9	75	:	:	:	:
17.	Total energy available (6 + 11 - 16)	:	3,755	3,790	4,282	4,545	4,758	5,123	:	:	:	:
18.	18. Secondary energy delivered within province	:	408	214	393	344	09	120	:	:	:	:
19.	19. Firm energy available within province (17 - 18)	2,443	3,347	3,576	3,889	4,201	4,698	5,003	5,344	5,573	5,807	950,9
20.	20. Indicated shortage	•	•	•	1	1	٠	ı	1	1	1	1
21.	21. Firm energy requirement within province (19 + 20)	2,443	3,347	3,576	3,889	4,201	4,698	5,003	5,344	5,573	5,807	950,9
22.	22. Firm energy requirement on province (12 + 13 + 21)	2,522	3,483	3,576	3,889	4,201	4,700	5,032	5,344	5,573	5,807	950,9

Requirements
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Sask	Saskatchewan		TABLE 1B.		/ Supply an	Energy Supply and Requirements	pents						
						Actual					Forecast	st	
		•	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
						B	illions of	millions of kilowatt-hours	hours				
_	Net generation by:												
1.	Hydro-electric		:	946	895	586	620	658	704	•	:	•	:
2.	Steam - Conventional)							(1,682	1,844	• •	::	::	::
. 4.10	Internal combustion) Gas turbine)		:	1,147	1,333	1,498	1,659	((109 (62	97	: :		: :	
. 9			:	1,693	1,902	2,084	2,279	2,511	2,682		•	:	:
	Receipts of energy from:	ı											
7.	(a) Firm: Other provinces United States		::		: :	::	::	1 1	29	1 1	1 1	1 - 6	1 1
9,5	(b) Secondary: Other provinces		: :	: :	: :	: :	: :	9 1	1 1	::	• •	0 0 0 0	• • • •
11.		energy		6	6	00	9	9	29	•	:	:	:
	Deliveries of energy to:												
12.	(a) Firm: Other provinces United States		515	503	504	517	575	621	249	657	989	661	661
14.	(b) Secondary: Other provinces	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	::	67	79	78	77	41	1 1			: :	::
16.	Total deliveries of energy	es of energy	:	570	583	595	619	662	647	:	:	:	:
17.		Total energy available (6 + 11 = 16)		1,126	1,322	1,497	1,666	1,855	2,064	:			:
18.	18. Secondary energy delivered within province	ed within province	:	,	•		1	1	t	:	:	:	:
19.	19. Firm energy available within province (17	thin province (17 - 18)	467	1,126	1,322	1,497	1,666	1,855	2,064	2,368	2,622	2,878	3,128
20.	20. Indicated shortage		1	4	ı	1	•	k	1	1	ŧ	1	1
21.	21. Firm energy requirement within province (19 + 20)	Within province (19 + 20)	467	1,126	1,322	1,497	1,666	1,855	2,064	2,368	2,622	2,878	3,128
22.	22. Firm energy requirement on	on province (12 + 13 + 21)	982	1,629	1,826	2,014	2,241	2,476	2,711	3,025	3,308	3,539	3,789
1													

Alberta

TABLE 1B. Energy Supply and Requirements

Bri	British Columbia	TABLE 1B.	1B. Energy	Energy Supply and Requirements	nd Requires	nents						
					Actual					Forecast	ast	
	1	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
					8	illions of	millions of kilowatt-hours	hours				
	Net generation by:											
1.	Hydro-electric	:	10,054	11,148	11,673	12,584	12,295	13,500	:	•	•	:
2.8	Steam - Conventional) Nuclear						535	999	::	::	• •	: :
. 4.	Interna] Gas turb	:	487	534	603	729	, 246 (246 (10	261	• •	0 0 0 0 0 0	::	* * *
9	Total net generation	•	10,541	11,682	12,276	13,313	13,086	14,429	:	:	:	•
	Receipts of energy from:											
7.	(a) Firm: Other provinces United States		::	::		::		7 11	4 11	7 1	നല	21 17
9.	(b) Secondary: Other provinces United States	: :	: :	: :	: :	: :	16	- 22	: :	::	: :	::
ï			545	18	30	72	18	62	:	:	:	:
	Deliveries of energy to:											
12.	(a) Firm: Other provinces	184	O 1	91	9 #	6 8	9 89	23	12	10	00 61	9 64
14.	(b) Secondary: Other provinces United States		13	13	28	27	30	14	: :	::	• •	: :
16.	Total deliveries of energy	:	35	32	48	84	55	39	:	:	•	:
17.	Total energy available (6 + 11 - 16)		11,051	11,668	12,258	13,337	13,049	14,452	:	:	:	:
18	18. Secondary energy delivered within province	•	06	89	167	233	242	230	•	:	•	:
19	19. Firm energy available within province (17 - 18)	4,741	10,961	11,579	12,091	13,104	12,807	14,222	15,095	16,116	16,893	17,520
20	20. Indicated shortage	6	14	•	1	1	1	1	1	1	1	1
21	21. Firm energy requirement within province (19 + 20)	4,741	10,975	11,579	12,091	13,104	12,807	14,222	15,095	16,116	16,893	17,520
22	22. Firm energy requirement on province (12 + 13 + 21)	4,925	10,984	11,585	12,097	13,109	12,815	14,247	15,109	16,128	16,903	17,528
1												

TABLE 1B. Energy Supply and Requirements

Yukon and Northwest Territories

National Convention by: Secondary: needly delivered within province (2) + 13 + 13 + 13 + 13 + 13 + 13 + 13 + 1						Actual					Forecast	ast	
Secondary arenty relations of emergy very laber of emergy very laber and very very very very laber very very very very very very very ve			1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
Stean - Comparison Stean -		Net generation by:					millions of	kilowatt	hours				
Steam - Commontone Steam -	-		:	112	131	146	152	174	187	:	:	:	÷
Contact Combustion Compute Contact C	3.6							, 2	2	:	:	:	:
(a) First provinces (b) Secondary energy from: (c) Secondary energy available (6 + 11 - 16) Total energy available (17 - 18) Total energy available (17 - 18) First energy available within province (17 - 18) First energy available within province (19 + 20) First energy requirement on province (12 + 13 + 21) First energy requirement on province (12 + 13 + 21) (a) First energy requirement on province (12 + 13 + 21) (b) First energy requirement on province (12 + 13 + 21) (c) First energy requirement on province (12 + 13 + 21) (d) First energy requirement on province (12 + 13 + 21) (e) First energy requirement on province (12 + 13 + 21) First energy requirement on province (13 + 13 + 13 + 14 + 138 + 153 + 162 + 167 + 169 + 17 First energy requirement on province (12 + 13 + 21) First energy requirement on province (12 + 13 + 21) First energy requirement on province (12 + 13 + 21) First energy requirement on province (12 + 13 + 21) First energy requirement on province (12 + 13 + 21) First energy requirement on province (12 + 13 + 21) First energy requirement on province (12 + 13 + 21) First energy requirement on province (12 + 13 + 21) First energy requirement on province (12 + 13 + 21) First energy requirement on province (13 + 13 + 13 + 13 + 13 + 15 + 16 + 16 + 16 + 17 + 18 + 18 + 18 + 18 + 18 + 18 + 18	.5.	Internal combustion) Gas turbine)	:	14	15	21	14	19	24			: :	: :
(a) Firm: Other provinces United States (b) Secondary energy from: (c) Firm: Other provinces (d) Firm: Other provinces (e) Firm: Other provinces (f) Secondary energy delivered within province (17 - 18) .	.9		:	126	146	167	166	195	213	:	:	:	
(a) First Other provinces (b) Secondary: (c) Secondary: (d) First (d) First (e) Combary evergy delivered within province (17 - 18) .		Receipts of energy from:											
(b) Secondary: Other provinces (a) First: Total receipts of energy (b) Secondary: (c) First: (b) Secondary: (c) First: (c) Secondary: (d) First: (e) Secondary: (e) Secondary: (f) Secondary: (f) Secondary: (g) Secon	7.8	(a) F:	::	::	::	::	::			1 1	1 1	()	1 1
Total receipts of energy to: (a) First: Other provinces Condary: Other province Condary: Other province Condary: Other province Condary: Total energy available (6 + 11 - 16) Condary: Total energy available within province Condary: Condary energy available within province Condary: C	9.	(b) Secondary: Other provinces United States	::	• •	•	::	::		1.1	::	::	: :	: :
(a) Firm: Other provinces United States (b) Secondary energy available (6 + 11 - 16) Secondary energy available within province (17 - 18) Firm energy requirement within province (19 + 20) Firm energy requirement on province (12 + 13 + 21) Firm energy requirement on province (12 + 13 + 21) (a) Firm energy requirement on province (12 + 13 + 21) (b) Secondary energy through the secondary energy available within province (19 + 20) (c) Firm energy requirement on province (19 + 20) (d) Firm energy requirement on province (12 + 13 + 21) (e) Firm energy requirement on province (12 + 13 + 21) (e) Firm energy requirement on province (12 + 13 + 21) (f) Firm energy requirement on province (12 + 13 + 21) (g) Firm energy requirement on province (12 + 13 + 21) (g) Firm energy requirement on province (12 + 13 + 21) (g) Firm energy requirement on province (12 + 13 + 21) (g) Firm energy requirement on province (12 + 13 + 21) (g) Firm energy requirement on province (12 + 13 + 21) (g) Firm energy requirement on province (12 + 13 + 21) (g) Firm energy requirement on province (12 + 13 + 21) (g) Firm energy requirement on province (12 + 13 + 21) (g) Firm energy requirement on province (12 + 13 + 21) (g) Firm energy requirement on province (12 + 13 + 21) (g) Firm energy requirement on province (13 + 13 + 21) (g) Firm energy requirement on province (13 + 13 + 21) (g) Firm energy requirement on province (13 + 13 + 21) (g) Firm energy requirement on province (13 + 13 + 21) (g) Firm energy requirement on province (13 + 13 + 21) (g) Firm energy requirement on province (14 + 13 + 21)	11.	Total receipts of	:	:	:	:	:	1	1		:		:
(a) Firm: Other provinces United States (b) Secondary: Other provinces (c) Secondary: Other provinces Total energy available (6 + 11 - 16) Secondary energy delivered within province (17 - 18) Firm energy requirement within province (19 + 20) Firm energy requirement on province (19 + 20) Firm energy requirement on province (12 + 13 + 21) Firm energy requirement on province (13 + 13 + 21) Firm energy requirement on province (14 + 13 + 21) Firm energy requirement on province (15 + 13 + 21) Firm energy requirement on province (15 + 13 + 21) Firm energy requirement on province (15 + 13 + 21) Firm energy requirement on province (15 + 13 + 21) Firm energy requirement on province (15 + 13 + 21) Firm energy requirement on province (15 + 13 + 21) Firm energy requirement on province (15 + 13 + 21) Firm energy requirement on province (15 + 13 + 21) Firm energy requirement on province (15 + 13 + 13 + 13 + 14 + 13 + 14 + 14 + 14		Deliveries of energy to:											
(b) Secondary: Other provinces United States	12.	(a) F			1 1		1 1		1 1	1 1	1 1		1 1
(6 + 11 - 16) 126 146 167 166 195 213	14.	(b) Secondary; Other provinces United States		1 1		1 1				::	::	::	::
(6 + 11 - 16) 126 146 167 166 195 213 covfnce 12 28 26 28 42 51 ce (17 - 18) 64 114 118 141 138 153 162 167 169 ce (19 + 20) 64 114 118 141 138 153 162 167 169 (12 + 13 + 21) 64 114 118 141 138 153 162 167 169	16.		•		1	,	•	1	1	:	:	:	:
covince 12 28 26 28 42 51 ce (17 - 18) 64 114 118 141 138 153 162 167 169 <	17.		:	126	146	167	166	195	213	:	:	:	:
ie (17 - 18) 64 114 118 141 138 153 162 162 167 169	18.	Secondary energy delivered within province	:	12	28	26	28	42	51	:	:	:	:
ce (19 + 20) 64 114 118 141 138 153 162 167 169 (12 + 13 + 21) 64 114 118 141 138 153 162 167 169	19.	province (17	79	114	118	141	138	153	162	162	167	169	172
nce (19 + 20) 64 114 118 141 138 153 162 162 167 169 (12 + 13 + 21) 64 114 118 141 138 153 162 167 169	20.	Indicated shortage	1	1	1	1	1	1	1	ı	1	1	ı
(12 + 13 + 21) 64 114 118 141 138 153 162 167 169	21.	Firm energy requirement within province (19 + 20)	79	114	118	141	138	153	162	162	167	169	172
	22.	(12 + 13	79	114	118	141	138	153	162	162	167	169	172

TABLE 2. Total Net Generating Capability within Provinces(1)

									Fore	Forecast		Perce (co	Percentage change (compounded)	nge
Province	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1951	1958	1962 1966
						thon	thousands of	kilowatts						
Newfoundland (including Labrador)	200	249	271	267	309	311	607	909	508	512	526	6.70	10.82	6.50
Prince Edward Island	18	25	26	25	38	37	37	59	59	59	59	6.75	9.22	12.25
Nova Scotia	248£	415	411	493	667	508	521	521	521	616	616	7.00	00°9	4.25
New Brunswick	198 ^r	321	372	373	388	436	780	538	538	545	642	8.12	6.58	7.50
Onebec	4,613	6,461	7,053	7,681	8,764	8,738	8,919	9,154	9,562	10,219	10,346	6.30	00°9	3,70
Ontario	2,824	4,932	5,881	6,275	6,650	6,858	7,223	8,185	8,467	8,793	9,208	8.90	5.25	6.25
Manitoba	423	639	734	734	932	908	1,033	1,034	1,244	1,349	1,350	8.46	8.90	06*9
Saskatchewan	245	463	538	671	752	757	752	808	876	906	906	10.80	8.75	4.75
Alberta	271	5884	734	768	925	953	1,133	1,205	I,387	1,389	1,631	11.40	11.50	9.50
British Columbia	1,015	2,350	2,568	2,877	3,028	3,070	3,307	3,432	3,592	3,596	3,686	11.30	6.50	2.75
Yukon and Northwest Territories	21	26	07	41	55	55	55	26	57	58	28	9.10	8.28	1.25
Canada	10,076	16,469	18,628	20,205	22,340	22,628	23,869	25,498	26,311	28,042	29,028	8.16	6.40	4.80
(1) Table 1A, item 6.														

TABLE 3. Firm Power Peak Load within Provinces(1)

									For	Forecast		Percel (cor	Percentage change (compounded)	nge
Province	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1951	1958 1962	1962 1966
						tho	thousands of	kilowatts	60					
Newfoundland (including Labrador)	182	222	231	231	245	242	294	347	394	405	416	4.45	6.21	9.07
Prince Edward Island	co	14	16	19	21	24	25	28	30	33	36	10.70	11.80	9,55
Nova Scotia	185	322	335	330	356	347	388	409	431	458	484	6.95	3.75	5.70
New Brunswick	184	258	273	291	319	319	347	397	4443	484	536	5.95	6.20	11.50
Quebec	3,462	5,256	5,375	5,466	5,871	6,258	6,370	6,836	7,249	7,750	8,244	5.71	4.33	6.65
Ontario	3,292	5,369	5,794	6,154	6,391	6,615	6,913	7,376	7,789	8,219	8,688	7.00	4.50	5.88
Manitoba	454	909	646	069	772	849	206	943	984	1,029	1,080	6.50	8,85	4.45
Saekatchewan	127	299	353	377	418	766	167	535	579	639	694	13.20	8.95	8.70
Alberta	220	476	580	649	714	836	882	696	1,063	1,160	1,275	13.45	11.05	9.65
British Columbia	861	1,821	1,935	1,963	2,123	2,368	2,317	2,504	2,661	2,777	2,958	9.40	4.60	6.30
Yukon and Northwest Territories	14	19	30	31	34	29	32	33	33	34	35	7.80	1.65	2.25
Canada	8,989	14,664	15,568	16,201	17,264	18,353	18,972	20,377	21,656	22,988	24,446	7.03	5.08	6,55
(1) Table 1A, Item 14.														

TABLE 4. Firm Energy Requirement within Provinces(1)

1951 1957 1958 1959 1960 1961 1963 1964 1965 1966 1961 1965 1966 1961 1965 1966 1961 1965 1966 1961 1962 1966 1962 1966 1962 1966 1962 1962 1966 1962 1966 1962										Forecast	ast		Percen (com	Percentage change (compounded)	nge
1,040 1,190 1,178 1,215 1,320 1,361 1,473 1,742 2,238 2,459 2,524 1,040 1,190 1,178 1,215 1,320 1,361 1,473 1,196 2,090 2,218 2,499 1,60	Province	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1951 1962	1958 1962	1962
1,046 1,190 1,178 1,215 1,320 1,361 1,473 1,742 2,238 2,459 2,524 1,027 1,471 1,552 1,626 1,714 1,775 1,965 2,090 2,218 2,349 2,490 23,464 31,376 32,342 34,035 39,522 40,389 41,101 44,023 47,081 50,117 20,492 30,960 31,468 34,904 36,382 37,727 39,631 42,399 45,059 47,462 50,153 2,443 3,347 3,576 3,889 4,201 4,698 5,003 5,344 5,373 5,807 6,056 4,741 10,975 11,579 12,091 13,104 12,807 14,222 15,095 16,116 16,893 17,320 4,741 10,975 11,579 12,091 13,104 12,807 14,222 15,095 16,116 16,893 17,320							million		watt hour	62					
1,027 1,471 1,532 1,626 1,714 1,775 1,965 2,090 2,218 2,349 2,490 1,002 1,347 1,417 1,537 1,674 1,782 1,912 2,111 2,556 2,714 3,097 2,490 1,002 1,347 1,417 1,537 1,674 1,782 1,912 2,111 2,556 2,714 3,097 2,490 1,002 1,340 31,376 32,342 34,904 36,382 37,727 39,631 42,399 45,059 47,462 50,153 1,28 1,126 1,322 1,497 1,666 1,855 2,064 2,368 2,622 2,878 3,128 1,126 1,126 1,322 1,497 1,666 1,855 2,064 2,368 2,622 2,878 3,128 1,126 1,126 1,322 1,497 1,666 1,855 2,064 2,368 2,622 2,878 3,128 1,126 1,126 1,322 1,497 1,666 1,855 1,097 14,222 15,095 16,116 16,893 17,520 172 17,077	•	1,040	1,190	1,178	1,215	1,320	1,361	1,473	1,742	2,238	2,459	2,524	3.20	5.75	14.40
The continuent Territories (4) 11,027 1,471 1,552 1,626 1,714 1,775 1,965 2,090 2,218 2,349 2,490 (2,218 1,912 1,912 1,912 1,912 2,111 2,556 2,714 3,097 (3,139 1,376 32,342 34,934 36,382 39,022 40,389 41,101 44,023 47,081 50,117 (3,139 1,376 32,342 34,934 36,382 39,727 39,631 42,399 45,059 47,462 50,153 (3,139 1,322 1,497 1,666 1,855 2,064 2,368 2,622 2,878 3,128 (3,138 1,114 2,358 2,624 3,997 3,452 3,808 4,121 4,520 15,095 16,116 16,893 17,520 (4,970 5,422 5,927 (0orthwest Territories (64 114 118 141 138 153 162 1162 16,116 16,893 17,240 (1,136 11,		34	57	63	71	79	88	101	115	125	149	160	10.40	12.50	12.20
1,002 1,347 1,417 1,537 1,674 1,782 1,912 2,111 2,556 2,714 3,097 23,404 31,376 32,342 34,035 38,552 39,022 40,389 41,101 44,023 47,081 50,117 2,566 2,4042 30,960 31,468 34,904 36,382 37,727 39,631 42,399 45,059 47,462 50,153 2,443 3,347 3,576 3,889 4,201 4,698 5,003 5,344 5,573 5,807 6,056 2,443 3,347 3,576 3,889 4,201 4,698 5,003 5,344 5,573 5,807 6,056 2,443 3,347 3,576 3,489 4,201 4,698 5,003 5,344 5,573 5,807 6,056 2,445 1,126 1,322 1,497 1,666 1,855 2,064 2,368 2,622 2,878 3,128 2,624 3,097 3,452 3,808 4,121 4,520 4,970 5,422 5,927 2,878 3,128 2,624 3,097 12,091 13,104 12,807 14,222 15,095 16,116 16,893 17,520 2,1878 2,17520 2,1878 2,17520		1,027	1,471	1,552	1,626	1,714	1,775	1,965	2,090	2,218	2,349	2,490	00*9	9.00	6.10
20,492 30,960 31,468 34,904 36,382 37,727 39,631 42,399 45,059 47,462 50,153 3,889 4,201 4,698 5,003 5,344 5,573 5,807 6,056 6,056 1,322 1,497 1,666 1,855 2,064 2,368 2,622 2,878 3,128 1,114 2,358 2,624 3,097 3,452 3,808 4,121 4,520 4,970 5,422 5,927 5,927 5,741 10,975 11,579 12,091 13,104 12,807 14,222 15,095 16,116 16,893 17,520 6,747 10,975 11,579 12,091 13,104 12,807 14,222 15,095 16,116 16,893 17,520 6,774 10,975 11,579 12,091 13,104 12,807 14,222 15,095 16,116 16,893 17,520 6,774 10,975 11,579 12,091 13,104 12,807 14,222 15,095 16,116 16,893 17,520 6,774 10,975 11,579 12,091 13,104 12,807 14,222 15,095 16,116 16,893 17,520 6,774 10,975 11,579 12,091 13,104 12,807 14,222 15,095 16,116 16,893 17,520 6,774 10,975 11,579 12,091 13,104 12,807 11,579 16,116 16,893 17,520 6,774 10,975 11,579 12,091 13,104 12,807 11,579 16,116 16,893 17,520 6,774 10,975 11,579 12,091 13,104 12,807 11,579 16,116 16,893 17,520 6,774 10,975 11,579 12,091 13,104 12,807 11,579 12,091 13,104 12,807 11,579 12,091 13,104 12,807 11,579 16,116 16,893 17,520 6,774 10,975 11,579 12,091 13,104 12,807 11,579 12,091 13,104 12,807 11,579 12,091 13,104 12,807 11,579 16,116 16,893 17,520 6,774 10,975 11,579 12,091 13,104 12,807 11,579 11,579 12,091 13,104 12,807 12,091 13,104 12		1,002	1,347	1,417	1,537	1,674	1,782	1,912	2,111	2,556	2,714	3,097	6.05	7.75	12.80
a hewan 2,443 3,347 3,576 3,889 4,201 4,698 5,003 5,344 5,573 5,807 6,056 6,056 1,855 2,064 2,368 2,622 2,878 3,128 1,126 1,322 1,497 1,666 1,855 2,064 2,368 2,622 2,878 3,128 2,014mbia 4,741 10,975 11,579 12,091 13,104 12,807 14,222 15,095 16,116 16,893 17,520 17, 200 1,126 11,126		23,404	31,376	32,342	34,035	38,552	39,022	40,389	41,101	44,023	47,081	50,117	5.10	5.70	5.80
a		20,492	30,960	31,468	34,904	36,382	37,727	39,631	42,399	45,059	47,462	50,153	6.20	5.87	90°9
thwest Territories 64 114 118 149 1,666 1,855 2,064 2,368 2,622 2,878 3,128 2,054 3,097 3,452 3,808 4,121 4,520 4,970 5,422 5,927 1,520 1,741 10,975 11,579 12,091 13,104 12,807 14,222 15,095 16,116 16,893 17,520 17,		2,443	3,347	3,576	3,889	4,201	4,698	5,003	5,344	5,573	5,807	6,056	6.70	8.75	4.90
Columbia		467	1,126	1,322	1,497	1,666	1,855	2,064	2,368	2,622	2,878	3,128	15.75	11.80	11.00
4,741 10,975 11,579 12,091 13,104 12,807 14,222 15,095 16,116 16,893 17,520 17,520 16,741 11,579 12,091 13,104 12,807 14,222 15,095 16,116 16,893 17,520 17,		1,114	2,358	2,624	3,097	3,452	3,808	4,121	4,520	4,970	5,422	5,927	12.65	11.90	9.50
64 114 118 141 138 153 162 167 169 172 173 173 173 173 173 173 173 173 173 173		4,741	10,975	11,579	12,091	13,104	12,807	14,222	15,095	16,116	16,893	17,520	10.50	5.10	5,35
980 CCT 73/3 ACT 7/0 TIT 0/0 III ATO BAT CON CAL CAL 1/0 AND TO 1/	Yukon and Northwest Territories	99	114	118	141	138	153	162	162	167	169	172	10.80	8, 25	1,50
55,828 84,321 81,239 94,103 102,602 103,010 111,040 111,041 120,001 130,503	Canada	55,828	84,321	87,239	94,103	102,282	105,076	111,043	117,047	125,667	133,383	141,344	6.45	6.22	6.22

TABLE 5. Indicated Reserve(1)

	,									Fore	Forecast		Perce (co	Percentage change (compounded)	egu
Province	-	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1951 1962	1958 1962	1962 1966
							T C	thousands	of kilowatts	ıtts					
Newfoundland (including Labrador):	••.														
1. Gross capability		200	249	271 239	267	309	311	409	361	508	512 419	526 430	6.70	10.82	6.50
	0 1	18	21	32	29	50	26	102	145	100	93	96	:	:	÷
indicated reserve expressed as cent of firm power peak load	a per	6.6	9.2	13.4	12,2	19.3	22.0	33.2	40.1	24.5	22.2	22,3	:	:	:
Prince Edward Island:															
1. Gross capability	vince	18	25 14	26 16	25	38 21	37 24	37	59	30	33	36	6.75	9.22	12.25
3. Indicated reserve (1 - 2)	• 1	10	11	10	9	17	13	12	31	29	26	23	:	:	:
cent of firm power peak load	a per 12.	125.0	78.6	62.5	31.6	81.0	54.2	48.0	110.7	9.96	78.8	63.9	:	:	:
Nova Scotia:															
1. Gross capability	::	248 189	415	411	493	359	348	521 389	521 410	521 431	616 458	616	7.00	3.58	4.25 5.51
3. Indicated reserve (1 - 2)	• §	59	91	73	160	140	160	132	111	06	158	132	:	:	:
cent of firm power peak load	a per 3]	31.2	28.1	21.6	0.84	39.0	0.94	33.9	27.1	20.9	34.5	21.4	:	:	:
S		0			6	9	:		;						
2. Firm power peak load on province		200	326	380 282	380	395	442 341	375	546	548	553 514	651 552	8,45	6.45	7.47
3. Indicated reserve (1 - 2)		12	09	86	80	53	101	113	124	76	39	66	:	:	:
cent of firm power peak lo		4.9	22.6	34.8	26.7	15.5	29.6	30.1	29.4	16.1	7.6	17.9	:	:	:
(1) Gross capability (Table 1A, items	+ 9	9); firm p	ower pe	power peak load	on province (Table	ce (Table		m 17); ii	ndicated	reserve	(Table 14	1A, item 17); indicated reserve (Table 1A, item 18).	3).		

TABLE 5. Indicated Reserve(1) - Continued

										Forecast	ast		Percen (com	Percentage change (compounded)	nge
	Province	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1951 1962	1958 1962	1962 1966
							tho	thousands of	kilowatts	00					
2; B	Guebec: Gross capability	4,614,	6,468	7,062 6,105	7,690	8,780	8,759	8,936	9,172 7,539	9,580	10,237	10,364	6.19	6.05	3.75
. 4	Indicated reserve (1 - 2)	361 ^r 8.5 ^r	7.7	957	1,471	2,154	1,767	1,865	1,633	1,627	1,782	1,412	0 0 0 0 0 0	* *	
1:	Gross capability	3,568 3,697 ^F	5,637 5,456	6,549	6,967	7,344 6,479	7,553	7,915	8,879	9,159	9,486	9,902	7.50	4.85	5.75
e, 4	Indicated reserve (1 - 2) Indicated reserve expressed as a per cent of firm power peak load	- 129 ^r	181	668	725	13.4	847	911	1,412	1,332	1,229	1,176	: :	0 6 0 0	: :
1.	Manitoba: Gross capability	500	708	802	806	1,018	988 849	1,120	1,172	1,332	1,437	1,438	8.45	8.70	6.45
m d	Indicated reserve (1 - 2) Indicated reserve expressed as a per cent of firm power peak load	37	86 13.8	156	116	246	139	213	229	348	37.5	33.1	: :	: :	: :
1:	Saskatchewan: Gross capability Firm power peak load on province	245	463 368	539	672	753	757 554	752	808	876	906	906	10.80	8.52	4.75
3.	Indicated reserve (1 - 2)	41 20.1	95	118	223	249	203	168	135	31.3	179	124	• • •	: :	: :

(1) Gross capability (Table 1A, items 6 + 9); firm power peak load on province (Table 1A, item 17); indicated reserve (Table 1A, item 18).

TABLE 5. Indicated Reserve(1) - Concluded

									Fore	Forecast		Perce (co	Percentage change (compounded)	nange
Province	1951	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1951	1958	1962 1966
						thousands	of	kilowatts						
Alberta:														
1. Gross capability	271 225	592 476	738	771 650	928	953	1,133	1,205	1,387	1,389	1,631	13.90	11.30	9.50
3. Indicated reserve (1 - 2)	97	116	157	121	213	112	247	230	317	222	349	:	:	:
cent of firm power peak load	20.4	24.4	27.0	18.6	29.8	13.3	27.9	23.6	29.6	19.0	27.2	:	:	:
Dad et als Antimektas														
1. Gross capability	1,020	2,350	2,568	2,877	3,028	3,075	3,311	3,438	3,599	3,605	3,696	11.30	6.55	2.80
	129	525	629	911	905	707	766	934	938	827	734	:	:	
	14.5	28.8	32,4	46.3	45.4	29.9	42.9	37.3	35.2	29.8	24.8	:	:	:
1. Gross capability	21	26	30	41	55 34	55	32	33	33	58	3. S.	9.10	8.28	1.25
3. Indicated reserve (1 - 2)	7	7	10	10	21	26	23	23	24	24	23	:	:	* *
cent of firm power peak lo	50.0	36.8	33.3	32.3	61.8	89.7	71.9	69.7	72.7	70.6	65.7	*	:	:
1. Gross capability	10,905 ^r 10,314 ^r	16,469	18,628 15,720	20,205 16,353	22,340 17,430	22,630 18,499	24,677 19,093	26,362	27,626	28,858 23,059	29,847	7.70	7.30	6.55
3. Indicated reserve (1 - 2)	591	1,653	2,908	3,852	4,910	4,131	4,979	5,007	2,090	4,987	4,526	:	:	÷
cent of firm power peak load	6.2	11.2	18.5	23.5	28.2	22.3	26.1	24.4	23.4	21.2	18.8	:		:
(1) Gross capability (Table 1A, items 6 + 9);		firm power peak	load on	province	(Table 1A	(Table 1A, 1tem 17);	; indicat	indicated reserve	(Table	1A, item 18).	8).			

GLOSSARY OF TERMS

Firm Energy Requirement

Energy required to meet firm obligations, or for use in own industrial plant other than in electric boilers.

Firm Power

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

Firm Power Peak Load

The annual Firm Power maximum average net kilowatt load of one hour duration within the Utility, System or Industrial Establishment.

Firm Obligations

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis or the best estimate of firm obligations in the absence of contracts.

Indicated Demand

The sum of firm power peak load and indicated shortage.

Indicated Reserve

Net capability less indicated firm power peak load within the province or gross capability less firm power peak load on the province.

Industrial Establishment

A firm which generates power primarily for use in its own plants.

Net Generating Capability

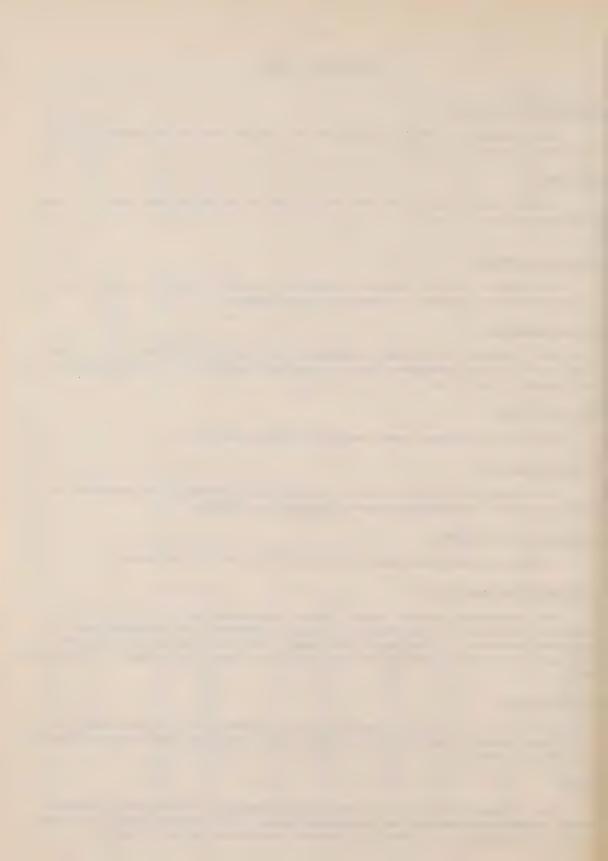
The maximum net kilowatt output (after station service) available from the generating facilities of the Utility, System or Industrial Establishment with all equipment available, at the time of the annual Firm Power Peak Load, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

Net Capability

The sum of net generating capability and purchases of firm power under firm obligation from other utilities less deliveries of firm power under firm obligation to other utilities.

System

Two or more Utilities, Industrial Establishments or a combination of these, having interconnections for the exchange of power, which although they may be separately incorporated, are controlled, managed or operated by one principal.











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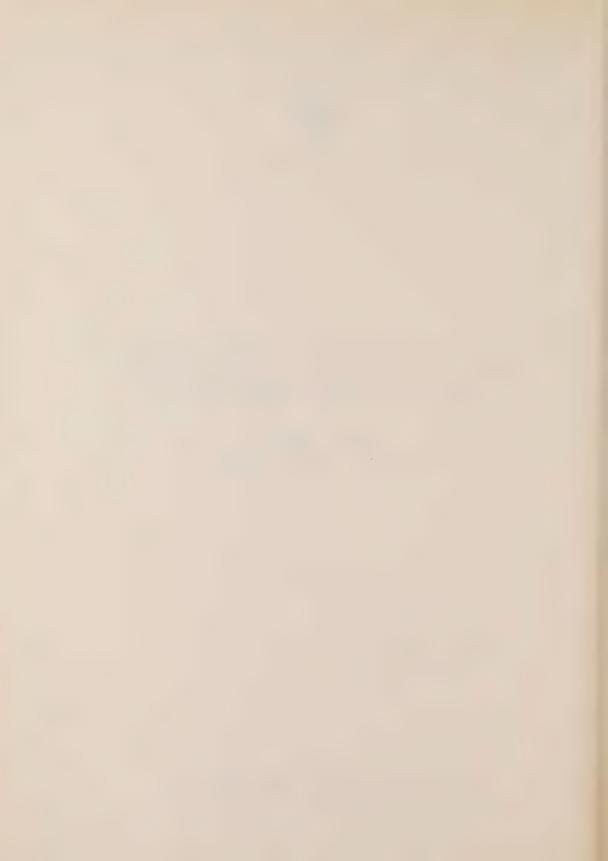


ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

1963 Actual 1964 - 1968 Forecast



DOMINION BUREAU OF STATISTICS



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Industry Division
Energy Statistics Section

ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

1963 Actual 1964 - 1968 Forecast

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TABLE OF CONTENTS

		Page
In	troduction	5
	<u>CHARTS</u>	
Α.	Total Generating Capability within Canada	8
В.	Net Capability and Peak Loads within Canada	9
3.	Net Generating Capability within Provinces	10
).	Net Capability and Firm Demand within Provinces	12
3.	Firm Energy Requirement within Canada	14
	TABLES	
••	Capability, Firm Power Peak Load and Energy Requirements	16
٠.	Total Net Generating Capability within Provinces This table compares provincial rates of growth in net generating capability.	40
	Firm Power Peak Load within Provinces This table compares rates of growth of firm power peak load within provinces.	41
	Firm Energy Requirement within Provinces This table compares rates of growth of firm energy requirement within provinces.	42
	Indicated Reserve This table shows the relationship between the demand for power and the ability to meet it in each of the provinces and in Canada as a whole.	43
1	Ossary of Terms	46

SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:

- r Revised figures.
- .. Figures not available.
- ... Figures not appropriate or not applicable.
 - Nil or zero.

INTRODUCTION

This report presents the results of the Annual Electric Power Survey of Capability and Load which was conducted in March 1964. The survey covers all producers of electric energy in Canada which generate 10 million kwh. or more per annum. This report, therefore, covers the same group of firms which provide the statistics for the monthly "Electric Power Statistics" report (catalogue No. 57-001). The report is organized in such a manner that there is a direct comparison and link with the monthly "Electric Power Statistics" in that the generation figures are common to the two publications: Any differences are due to late revisions. The forecast period for this report has been extended to a five year period as compared with four in previous years.

There are approximately 150 responding firms in the group, about half of which are utilities and half industrial establishments. The combined group accounts for 99.6 per cent of all gneration, and all the imports and exports. The utilities group contributes approximately 80 per cent of the generation to the Canada total.

The survey is carried out in co-operation with the Canadian Electrical Association. Area representatives of the Association collect and edit the returns, which are forwarded to the Dominion Bureau of Statistics for final revision, editing, and compilation. The assistance received from the Canadian Electrical Association and its members has been invaluable.

Review of Survey Results

Total net generating capability in 1963 for firms which generate over 10 million kw. per year increased 1,609,000 kw. or 6.74 per cent to 25,478,000 kw. The forecast years, 1964-1968, indicate an anticipated growth of 7,160,000 kw., or a compound growth rate of 6.39 per cent as compared with the 1951-1963 growth rate of 8.04 per cent. Thermal capability is expected to grow at the rate of 9.5 per cent in thr forecast period compared with 15.5 per cent in the previous twelve-year period, while hydro-electric capability is expected to increase at 3.6 per cent compared with 6.7 per cent in the previous twelve years. The hydro-electric capability forecast figures do not include the Hamilton Falls development in Labrador as the plans for this project are indefinite. Most of the thermal capability growth will be in steam plants. There will be small increases in the thermal capability of gas turbine and internal combusion plants.

The first nuclear firm capability is now forecast for 1967.

In 1962 it was forecast that the net generating capability in 1963 would be 25,498,000 kw. The actual 1963 net generating capability fell short of this estimate by only 20,000 kw. The 1962 forecast for 1963 generating capability was approximately realized in all provinces except Ontario, which was significantly under the forecast, and Quebec, which was significantly over the forecast.

The largest absolute growths in generating capability for the forecast years are indicated for Quebec - 2,323,000 kw., Ontario - 2,199,000 kw., Alberta - 790,000 kw., and British Columbia - 769,000 kw. Whereas Quebec will meet the increased generating capability by adding 2,014,000 kw. in hydro capability and 309,000 kw. in thermal capability, Ontario plans to increase its capability by adding 1,915,000 kw. in thermal capability, including 218,000 kw. nuclear, and 284,000 kw. hydro. Alberta plans to add 490,000 kw. in thermal capability and 300,000 kw. in hydro capability. British Columbia estimates increases of 424,000 kw. and 345,000 kw. in hydro and thermal capability respectively.

The firm power peak loads have not shown the same change in rate of growth as generating capability. In the period from 1951 to 1963 the growth rate of firm power peak loads in Canada was 7.2 per cent while the forcast rate of growth from 1964 to 1968 is 6.0 per cent. As a result, the indicated reserve is expected to vary slightly during the forecast years from 4,573,000 kw. in 1963 to a

low of 4,369,000 kw. in 1964 and a high of 4,663,000 KW in 1968. The indicated reserve, stated as a percentage of firm power peak load, is forecast to decline steadily from 21.9 per cent in 1963 to 16.4 per cent in 1967 and then rise to 16.7 per cent in 1968.

Indicated reserve data does not take into account reduction in generating capability due to adverse flow conditions such as ice, low water etc., which occur during the peak load season. In 1963, this reduction in generating capability amounted to about 780,000 kw. with Quebec accounting for 55.8 per cent, Ontario 41.2 per cent, Newfoundland 1.8 per cent, Saskatchewan 0.9 per cent and British Columbia 0.3 per cent.

Firm energy requirements increased 5.6 per cent from 111,043 million kw. in 1962 to 117,254 million kw. in 1963 compared with a growth of 6.4 per cent in the previous twelve year period and a forecast growth rate of 6.1 per cent for the period 1964-1968. The additional firm energy requirement was supplied by an increase in net generation of 4,611 million kw., a drop in net exports of 565 million kw. and a smaller amount of secondary energy delivered within Canada. This decrease amounted to 1,035 million kw.

Concepts and Definitions

Table 1. Capability, Firm Power Peak Load and Energy Requirements:

The generating capability and firm power peak load concepts are virtually unchanged from previous reports. However, more detail has been provided in the generating capability which is now broken down to identify conventional steam, nuclear steam, internal combustion, and gas turbine equipment. Generating capability measures the expected power of all available generating facilities of the province (or nation) at the time of one-hour firm peak load for each of the respondents. This may be equal to, or smaller than, the generating capacity as measured by the name plate rating of the equipment and published in the "Prime Mover and Electric Generating Equipment" report.

The variations between generating capability and generating capacity may be caused by high water in reservoirs resulting in a higher water head and greater generation than the name plate capacity; the impossibility of placing all pieces of equipment on the line at the same time, low water ice, or some equipment being considered unreliable, thereby resulting in generation below capacity.

All figures in Table 1 of the report are calculated at the time of the one-hour peak load for each of the respondents. As a result, capability and peak loads are non-coincident (the arithmetic sur of the actual peak loads regardless of time of occurrence) and may be equal to, or greater than, the coincident peak load for each of the provinces. Insofar as the utilities have about 80 per cent of the load of the nation and most of the peak loads occur in December, the variation from the coincident peak will not be too great. Two major systems which account for almost 40 per cent of the capability have only a slight variation between their coincident and non-coincident peak loads. Of thirty-five major systems serving Canada, seven had peak loads on December 16, four on December 17, eighteen on other dates between November 30 and December 31 and six outside this period.

Receipts and deliveries of firm power used in calculating net capability are the interprovincial and international transfers of power under firm contracts, or the best estimate of firm obligations possible in the absence of contracts. The actual receipts and deliveries of firm and secondary power are taken into account in the calculation of firm power peak loads.

Peak loads are the total demands within a province after all inter-changes have been taken into account to remove any duplication. The peak loads include all electricity consumed by ultimate customers, line losses, and manufacturing plants own consumption, but do not include generating station service which is deducted before arriving at generating capability. Firm power peak loads exclude the secondary or surplus energy used by ultimate customers on an interruptible basis, as these are not firm obligations.

Indicated shortages are a measure of the firm power commitments that a system was not able to meet at the time of its peak load.

The indicated power reserve of a province (shown in Table 1) is the reserve after all firm obligations and shortages have been met or received. It is the difference between net capability and total firm peak load within the province or gross capability less firm power peak load on the province, and is a measure of the industries' ability to satisfy demands of a province and meet contingencies. Since not all systems are fully interconnected, the reserves of power shown cannot always be fully utilized.

Net generation figures which are identical with the figures presented in the monthly "Electric Power Statistics" report (or revisions thereof) are exclusive of station service and, for 1963, are subdivided by type of generation. No forecasts of generation are given for 1964-68.

Although complete historical figures are not currently available, it is expected that they will be included in future reports.

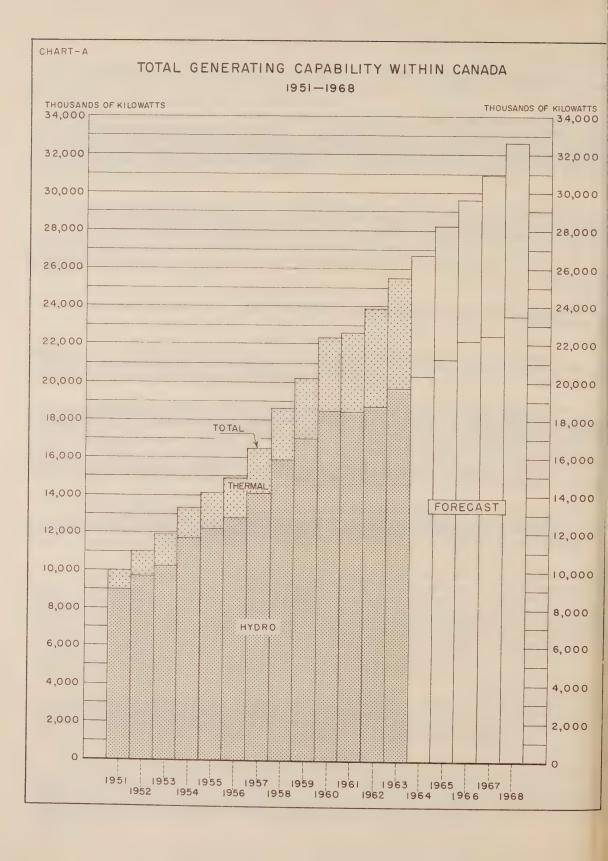
 $\underline{\text{Firm energy receipts and deliveries}}$ are the actual receipts and deliveries under firm contracts or obligations.

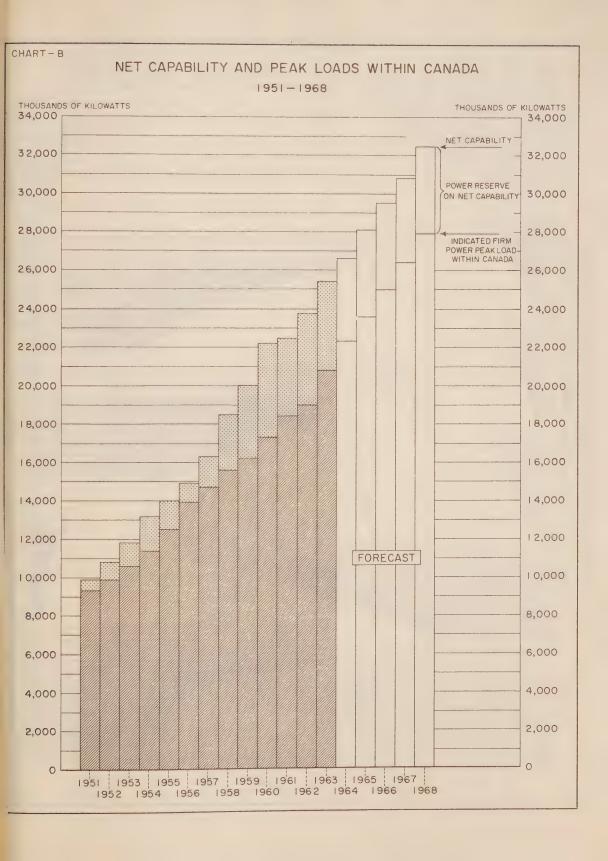
Secondary energy delivered within the province is the surplus energy sold at time of low demand and when surplus generating capability is available. This energy may be interrupted at any time and, consequently, sells at very low rates, generally for use in electric boilers.

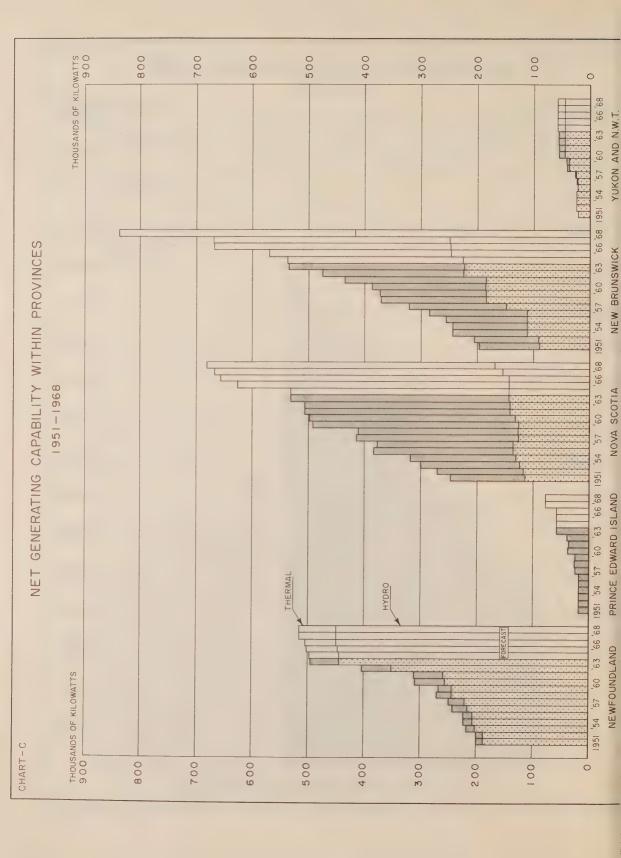
Firm energy available is the measure of primary demands of electric energy, including residential, commercial and power sales, and all line losses after deducting net exports. It is an important economic indicator and, as such, is of major importance in forecasting.

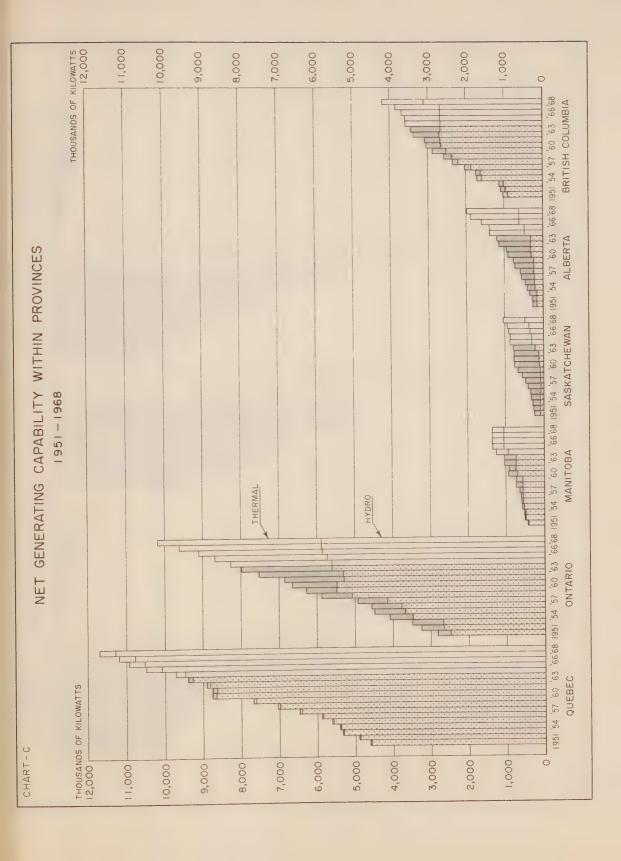
<u>Indicated shortage</u> is an estimate of the total quantity of energy a system was unable to deliver due to its inability to meet firm power commitments during the year; no shortages have occurred since 1957.

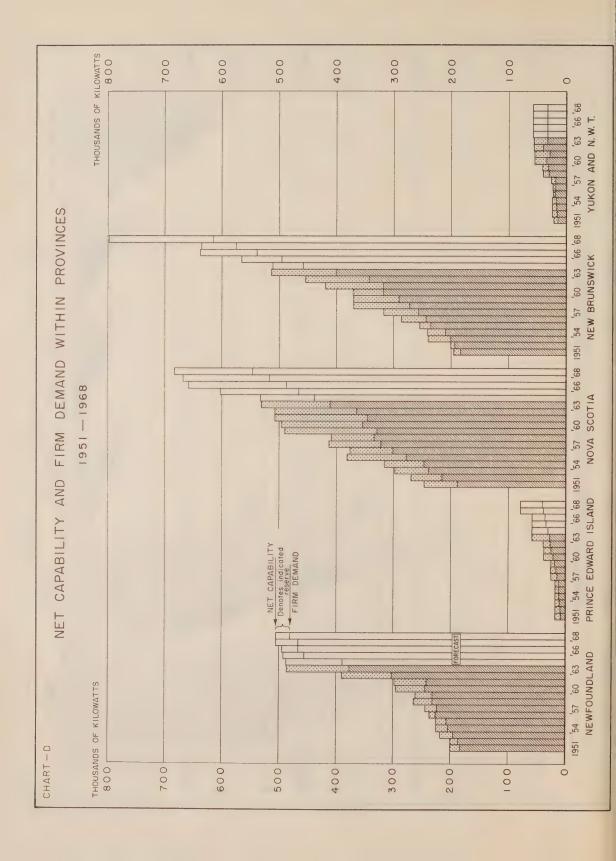
Firm energy requirements are a measure of the needs for electric energy that have been or can be met (firm energy available) and those that cannot be serviced (shortage).

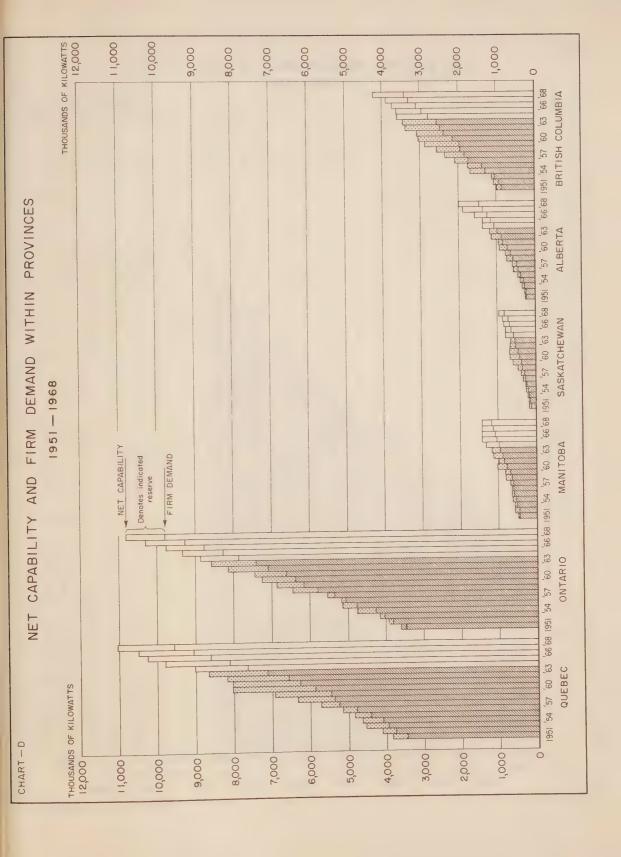












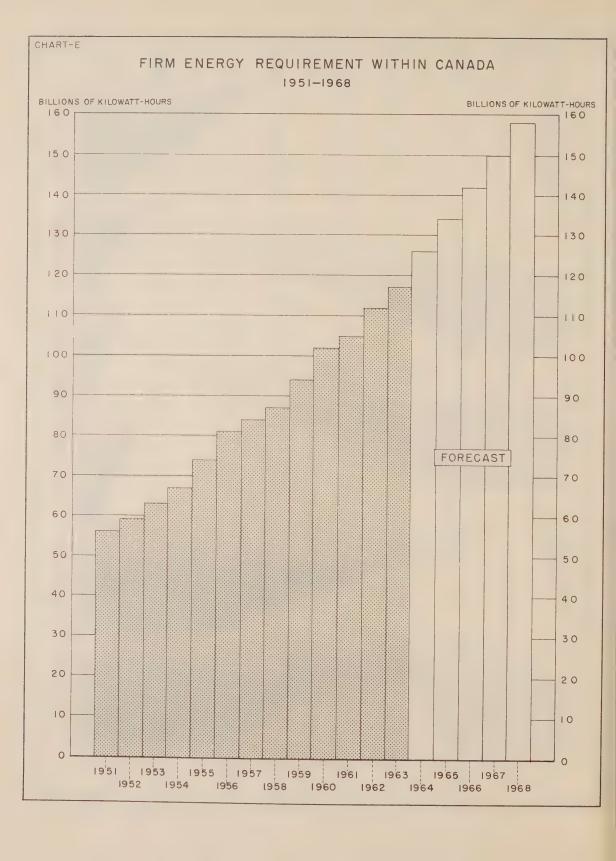




TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Canada

	fanty to and seed			Actual	al					Forecast		
		1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
						thousa	thousands of kilowatts	owatts				
	Net generating capability:											
		9,044	17,086	18,516	18,389	18,651	19,666	20,319	21,211	22,058	22,378	23.496
. w.	Steam - Conventional) Nuclear	1	6	0	3,648	4,596	5,194	5,813	6,356	6,856	7,623	8,251
.5.	Internal combustion) Gas turbine	1,032	3,119	3,024	240	251	236	244	250	254	256	258
9	Total net generating capability	10,076	20,205	22,340	22,628	23,869	25,478	26,759	28,201	29,552	30,860	32,638
	Receipts of firm power from:											
7.	Other provinces	: '	: 1	: '		: 4	. 5	. 2	• m	. "	* m	• m
9.	Total receipts	,	ı	,	2	4	2	2	3	9	9	3
	Deliveries of firm power to:											
10.	Other provinces	175	152	166	146	121	122	127	06			101
12.	Total deliveries	175	152	166	146	121	122	127	06	91	97	101
13.	Total net capability (6 + 9 - 12)	9,901	20,053	22,174	22,484	23,752	25,358	26,634	28,114	29,464	30,766	32,540
,	Peak loads:											
14.	Firm power peak load within CanadaIndicated shortages	8,989	16,201	17,264	18,353	18,972	20,757	22,265	23,605	24,953	26,338	27,789
16.	Total indicated firm power peak load within Canada (14 + 15)	9,310	16,201	17,264	18,353	18,972	20,785	22,265	23,633	25,023	26,424	27,877
17.	Firm power peak load on Canada (12 + 16)	9,485	16,353	17,430	18,499	19,093	20,907	22,392	23,723	25,114	26,521	27,978
18.	Indicated reserve: Indicated reserve (13 - 16)	591	3,852	4,910	4,131	4,780	4,573	4,369	4,481	4,441	4.342	4.663

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Canada

	Energy	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
N e	Net generation by:				a	millions of kilowatt-hours	kilowatt-	hours				
	Hydro-electric	:	96,517	105,770	103,692	103,695	103,539	:	:	:	:	:
20.	Steam - Conventional) Nuclear		1		8,822	12,543	17,111	:::	::	::	::	::
22.	Internal combustion) Gas turbine)	:	7,339	8,271 (509	514 257	593			: :	: :	: :
	Total net generation	:	103,856	114,041	113,271	117,031	121,642	:	:	:	:	:
Re	Receipts of energy from:											
25.	(a) Firm: Other provinces United States	::	::	::	• co •		.:.	12	12	12.		12
27.	(b) Secondary: Other provinces United States	: :	: :		1,392	2,764	2,867					
29.	Total receipts of energy	:	515	367	1,400	2,786	2,879	:		:	:	:
A	Deliveries of energy to:											
30.	(a) Firm: Other provinces United States	1,418	1,253	1,283	1,122	817	858	858	702	779	671	
32.	(b) Secondary: Other provinces	: :	3,331	4,228	3,058	3,267	2,754	: :			: :	
34.	Total deliveries of energy	:	4,584	5,511	4,180	4,084	3,612	:	:	:	:	:
35.	Total energy available $(24 + 29 - 34)$:	787,66	108,897	110,491	115,733	120,909	:	:	:	÷	:
	36. Secondary energy delivered within Canada		5,684	6,615	5,415	4,690	3,655	:	:	:	:	:
	37. Firm energy available within Canada (35 - 36)	55,516	94,103	102,282	105,076	111,043	117,254	117,254 125,534	134,113	141,667 149,688	49,688	157,923
	38. Indicated shortage	312	ı	1	1	1	1	ı	ı	ŧ		1
9.	39. Firm energy requirement within Canada (37 + 38)	55,828	94,103	102,282	105,076	111,043	117,254	117,254 125,534	134,113	141,667 149,688	889,64	157,923
	40. Firm energy requirement on Canada (30 + 31 + 39)	57.246	95,356	103,565	106,198	111,860F	118,112	118,112 126,392	134,815	142,311 150,359	50,359	158,621

Newfoundland

	Canada 14th value of 1000			Actual	al					Forecast		
		1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
	<pre>Gapability:</pre>					thousands of		kilowatts				
	Net generating capability:											
1.	Hydro-e.	188	243	255	258	350	444	474	447	449	449	449
m	Nuclear)	12	24	54	,	,	1			t	t	1
.5.	Internal combustion) Gas turbine) -				(13	14	7	00 I	10	10	11	11
. 0	Total net generating capability	200	267	309	311	604	964	497	502	504	515	515
	Receipts of firm power from:											
7.	Other provinces	1 (1 1	((F I	i 1	1 1	1 1	, ,	1 1	1 1	1 1
.6	Total receipts	,	,	,	ı	1	1		'	,	,	'
	Deliveries of firm power to:											
10.	Other provinces	1 1	7	14	13	13	10	10	10	10	10	10
12.	Total deliveries	,	7	14	13	13	10	10	10	10	10	10
13.	Total net capability (6 + 9 - 12)	200	260	295	298	396	486	487	492	767	505	505
	Peak loads:											
14.	Firm power peak load within province	182	231	245	242	294	349	389	456	456	456	481
16.	Total indicated firm power peak load within province (14 + 15)	182	231	245	242	294	377	389	456	997	997	481
17.	Firm power peak load on province (12 + 16)	182	238	259	255	307	387	399	997	476	476	491
	Indicated reserve:											
18.	Indicated reserve (13 - 16)	18	29	50	56	102	109	98	36	28	39	24

Newfoundland

24.

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Prince Edward Island

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10. 11. 13.

4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4			Actual	ual					Forecast		
כמלמסדדדר), מוות הפמא זכמת	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
					thousan	thousands of kilowatts	watts				
Capability:											
Net generating capability:											
Hydro-electric	188	- 25	1 ©	32 - ()	32	51	51	51	51	17	71
Internal combustion) Gas turbine)				5 -	י ט	7	7	7 -	7	7 -	7
Total net generating capability	18	25	38	37	37	58	58	58	58	78	78
Receipts of firm power from:											
Other provinces	1)	1 5	1 1	1 1	1 1	()	1 1	1 1 ;	1 1	1 1	1 (
Total receipts	1	ŧ	,		1	,	,		,	1	
Deliveries of firm power to:											
Other provinces	1 1	1 1			1 1	1 1	. ,	+ +	1 1	, ,	, ,
Total deliveries	,	1	•		•	ŧ	1	1		1	'
Total net capability (6 + 9 - 12)	18	25	38	37	37	58	58	58	58	78	78
Peak loads:											
Firm power peak load within province	œ ι	19	21	24	25	27	30	33	35	38	- 07
Total indicated firm power peak load within province (14 + 15)	80	19	21	24	25	27	30	33	35	38	40
Firm power peak load on province (12 + 16)	œ	19	21	24	25	27	30	33	35	38	07
Indicated reserve:	;	,	;		,	č	Š	i.	ć	9	o e
Indicated reserve (13 - 16)	TO	Q	1/	13	17	31	67	6	67	3	65

18.

17.

14. 15. 16.

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Princ	e Edwar	Prince Edward Island TABLE 1. Capat	ility, Fi	rm Power Pe	eak Load, a	Capability, Firm Power Peak Load, and Energy Requirements	Requiremen	ts - Concluded	nded				
					Actual	al				Fo	Forecast		
		Energy	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
						日	millions of	kilowatt-hours	hours				
	Net gene	Net generation by:											
19.	Hydro-	Hydro-electric	•	1	1		ŧ	ı	•	*	:	:	:
20.	Steam	Steam - Conventional) Nuclear)		i	1	(81	93	102	: :		::	: :	::
22.	Inter	Internal combustion)	•	1/	6	(7	1 00	6 1				::	::
24.	Tota	Total net generation		7.1	79	88	101	111		•	•		:
	Receipt	Receipts of energy from:											
25.	(a) Firm: Othe Unii	irm: Other provinces United States	::	::	::	r - r	7 1	1 1	1-1	1 1	1 1	1 1	1 1
27.		(b) Secondary: Other provinces United States			: :	1 1		1 1			::	::	
29.		Total receipts of energy	:	:	9	1	1	ı	:	:		:	:
	Deliver	Deliveries of energy to:											
30.		(a) Fitm: Other provinces	1 1	1 3	1 1	t 1	1.1	r t	1 1	1.1	i i	т т	1 1
32.		(b) Secondary: Other provinces United States	1 1	1 1	1 1		9 8	1 1					: :
34.		Total deliveries of energy	t	2	·	ī		,	:	:		:	:
35.		Total energy available (24 + 29 - 34)	:	71	79	88	101	111		:			:
36	Second	36. Secondary energy delivered within province	1	,	,	t	1	1	:	:	:	:	:
37	. Firm e	37. Firm energy available within province (35 - 36)	34	7.1	79	88	101	111	120	129	138	147	158
38	. Indica	38. Indicated shortage	1	1	ı	r	1	1	1	t	ı		ı
39	. Firm	39. Firm energy requirement within province (37 + 38)	34	71	79	88	101	111	120	129	138	147	158
40	. Firm	40. Firm energy requirement on province (30 + 31 + 39)	34	7.1	79	888	101	111	120	129	138	147	158
1													

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Nove	Nova Scotia TABI	TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements	ility, Fir	m Power Pe	ak Load, a	nd Energy	Requiremen	its				
	Capability and neak load			Actual	al					Forecast		
		1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
	Capability:					thousan	thousands of kilowatts	watts				
	Net generating capability:											
1.4%	Hydro-e Steam -	114	126	132	141	141 378	143	143	143	143	154	169
. 4·0	Nuclear) Internal combustion) Gas turbine)	134	367	367	. 2 .	. 21	1 8 1	1 7 1	1 8 1	: 21	1 61	1 8 1
9	Total net generating capability	248	493	667	508	521	532	532	627	657	999	683
	Receipts of firm power from:											
7.8	Other provinces	, ,	1 1	1 1	1 1	. ,	1 1	1 1	1 1	1 1	1 1	
9.	Total receipts	1	,	7	,	,	1	,	,	1		'
	Deliveries of firm power to:											
10.	Other provinces	- 2	က၊	ကျ	1 -		e4 1	1 1	25		1 1	ł ś
12.	Total deliveries	2	6	3	1	1	1	1	25	ī	,	
13.	Total net capability (6 + 9 - 12)	246	490	967	507	520	531	532	602	657	668	683
	Reak loads:											
15.	rim power peak load within province	185	330	356	347	388	411	438	456	488	517	547
16.	Total indicated firm power peak load within province (14 + 15)	187	330	356	347	388	411	438	997	488	517	547
17.	Firm power peak load on province (12 + 16)	189	333	359	348	389	412	438	491	887	517	547
	Indicated reserve:											
18.	Indicated reserve (13 - 16)	59	160	140	160	132	120	96	136	169	151	136

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Nova	Scotia TABLE 1,	lity, Fir	n Power Pea	ik Load, ar	Capability, Firm Power Peak Load, and Energy Requirements	equiremen	ts - Concluded	nded				
				Actual	11				Fo	Forecast		
	Energy	1951	1959	1960	1961	1962	1963	1964	1965	1966	1961	1968
					Įm.	millions of	of kilowatt-hours	hours				
-	Net generation by:											
19.	Hydro-electric	:	674	632	549	710	199	:	:	:		:
20.	Steam - Conventional)				(1,301	1,300	1,313	: :	: :	: :	0 0	
21.	Nuclear)	•	996	1,162		ı	1	:	:	:	:	:
23.	Gas turbine) Total net generation	:	1,640	1,794	1,850	2,010	2,112					:
	Receipts of energy from:											
25.	(a) Firm: Other provinces		::	::	16	(-1	1 1		1 7	1 1	1 1	1 1
27.	(b) Secondary: Other provinces	:	:	: :	1 1	79	57				• •	: :
28.	Total receipts of energy	:		:	16	19	57	•	*	:	:	:
	Deliveries of energy to:											
30.	(a) Firm: Other provinces United States	h 1	14 -	08	12		οο I	-	186	1 1	1 1	t 3
32.	(b) Secondary: Other provinces United States	()	1 1	1 1	79	101	09	•		::		: :
34.		1	14	80	. 91	108	99		•	:	*	:
35.	Total energy available (24 + 29 - 34)	a p	1,626	1,714	1,775	1,969	2,101	:		•	:	:
C	70 And And Service of 14th in properting		1	,	,	4	1	:	:	:	:	•
37.		1,027	1,626	1,714	1,775	1,965	2,100	2,212	2,345	2,519	2,662	2,769
38	38. Indicated shortage	ı	1	1	1	1	1	1	å	1	1	1
39.	39. Firm energy requirement within province (37 + 38)	1,027	1,626	1,714	1,775	1,965	2,100	2,212	2,345	2,519	2,662	2,769
40	40. Firm energy requirement on province (30 + 31 + 39)	1,033	1,640	1,794	1,787	1,972	2,108	2,219	2,531	2,519	2,662	2,769

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

	Capability and peak load			Actual	al					Forecast		
		1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Capabi	Ganability:					thousands	of	kilowatts				
Net	Net generating capability:											
1. Hy	Hydro-electric	06	185	186	185	233 240	224	226 304	247	248 413	249	417
	Internal combustion) Gas turbine)	108	188	202	, w i							
۰.	Total net generating capability	198	373	388	436	480	535	537	570	899	699	837
80 80 80 80 80 80 80 80 80 80 80 80 80 8	Receipts of firm power from:											
7. Ot 8. Un	Other provinces	2	7 -	7 -	V O 1	9 2 2	10 01	20 03	31	98	7	3.7
.6	Total receipts	2	7	7	9	80	7	7	34	6	10	10
De 14	Deliveries of firm power to:											
10. 0¢ 11. Un	Other provinces	- 7	1 6	23	22	- 28	28	33	39	- 40	747	- 48
12.	Total deliveries	4	6	23	22	28	28	33	39	07	777	87
13.	Total net capability (6 + 9 - 12)	196	371	372	420	095	514	511	565	637	635	799
Peak loads:	: 											
14. Firm 15. Indi	Firm power peak load within province	184	291	319	319	347	401	657	967	539	575	615
16. To	Total indicated firm power peak load within province (14 + 15)	184	291	319	319	347	401	657	967	539	575	615
17. F1:	Firm power peak load on province (12 + 16)	188	300	342	341	375	429	492	535	579	619	663
H	Indicated reserve:											
18. Indi	Indicated reserve (13 - 1b)	12	80	53	101	113	113	52	69	98	09	184

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

				Actual	al				FC	Forecast		
	Energy	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
					B	millions of	of kilowatt-hours	-hours				
Net ge	Net generation by:											
19. Hydr	Hydro-electric	:	975	887	766	1,191	1,272	÷	:	:	:	:
20. Stea	Steam - Conventional)				(870	895	1,019	:	:	:	:	:
	Nuclear)	:	692	842		ı	1	:	:	:	:	:
22. Inte 23. Gas	Internal combustion)				. 18	2 -	٦ 5	: :	: :	: :	: :	
24. To	Total net generation	:	1,667	1,729	1,882	2,088	2,296	:	:	:	:	:
Receip	Receipts of energy from:											
(a) 25. 26.	(a) Firm: Other provinces United States	::	::	::	31	28	29	30	211	28	30	33
(b) (b) 27. 28.	(b) Secondary: Other provinces United States	::	: :	: :	79	101	60	::	: :		::	: :
29.	Total receipts of energy	:	32	111	124	146	103	:	:	:	:	:
Deliv	Deliveries of energy to:											
(a) 30. 31.	(a) Firm: Other provinces United States	41	51	58.	125	166	178	200	243	246	265	284
32. (b)	(b) Secondary: Other provinces United States	::	109	107	16	67	57 68	: :	::	: :	: :	: :
34.	Total deliveries of energy	:	160	165	219	317	303	:	:	:	:	:
35.	Total energy available $(24 + 29 - 34)$:	1,539	1,675	1,787	1,917	2,096	:	:	:	:	
6. Secon	36. Secondary energy delivered within province	:	2	1	N	70	н	:	:	:	:	:
7. Firm	37. Firm energy available within province (35 - 36)	1,002	1,537	1,674	1,782	1,912	2,095	2,308	2,752	3,013	3,269	3,450
8. Indic	38. Indicated shortage	1	,	1	¢	t	,	1	1	1	(1
9. Firm	39. Firm energy requirement within province (37 + 38)	1,002	1,537	1,674	1,782	1,912	2,095	2,308	2,752	3.013	3,269	3,450
D 4 mm												

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Quebec

				Actual	al					Forecast		
	Capability and peak load	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
	Capability:					thousan	thousands of kilowatts	watts				
	Net generating capability:											
1.4.	Hydro-electric	4,587	7,612	8,658	8,628	8,830	9,271	9,460	10,093	10,527	10,781	11,285
. 4.0	Internal combustion) Gas turbine)	26	69	106	(15 (36	12 36	10	36	96	36	6 36	. 6
. 9	Total net generating capability	4,613	7,681	8,764	8,738	8,919	9,376	9,711	10,494	10,941	11,195	11,699
	Receipts of firm power from:											
7.	Other provinces	. 1	6	16	19	15	12	12	12	12	12	12
9.	Total receipts	1	6	16	21	17	12	12	12	12	12	12
	Deliveries of firm power to:											
10.	Other provinces	735	696	698	696	697	703	706	902	712	715	674
12.	Total deliveries	791	753	755	734	791	402	712	715	718	721	089
13.	Total net capability (6 + 9 - 12)	3,823	6,937	8,025	8,025	8,235	8,679	9,011	9,791	10,235	10,486	11,031
	Reak loads:											
14.	Firm power peak load within province Indicated shortages	3,462	5,466	5,871	6,258	6,370	7,118	7,653	8,102	8,599	9,046	9,546
16.	Total indicated firm power peak load within province (14 + 15)	3,462	5,466	5,871	6,258	6,370	7,118	7,653	8,102	8,599	9,046	9,546
17.	Firm power peak load on province (12 + 16)	4,253	6,219	6,626	6,992	7,071	7,827	8,365	8,817	9,317	9,767	10,226
	Indicated reserve:											
18.	Indicated reserve (13 - 16)	361	1,471	2,154	1,767	1,865	1,561	1,358	1,689	1,636	1,440	1,485

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Net generation by: Net gen					Act	Actual					Forecast		
Receipted by:		Energy	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Steam - Convention by: Steam - Convention by: Steam - Convention by: Steam - Convention by: Internal combustion Internal compusion Internal combustion Internal compusion Internal comp							millions o	f kilowatt	-hours				
Steas = Conventional 1		Net generation by:											
Steam - Conventional States State	19.	Hydro-electric	:	44,418	20,000	49,435	662,64	757,67	:	:	:	:	:
Total net generation 1	20.	Steam - Conventional) Nuclear >				276	288	320	::	: :	::	: :	::
Secretar of energy from: (a) First: (b) First: (c) First: (c	22.	Internal combustion) Gas turbine)	:	509	273	7	13	44	: :		: :	: :	: :
(a) Firm:	24.	Total net generation	:	44,627	50,273	49,726	50,129	49,819	:	:	:	:	:
(a) First Other provinces (b) Secondary secure for energy to: (c) First Other provinces (d) First Other provinces (e) First Other provinces (e) First Other provinces (f) Secondary senergy available (24 + 29 - 34) Total energy available within province (37 - 34) First energy requirement on province (38 - 31 - 34) First energy requirement on province (38 - 31 - 34) First energy requirement on province (38 - 31 - 34) First energy requirement on province (38 - 31 - 34) First energy requirement on province (38 - 31 - 34) First energy requirement on province (38 - 31 - 34) First energy requirement on province (38 - 31 - 34) First energy requirement on province (38 - 31 - 34) First energy requirement on province (38 - 31 - 34) First energy requirement on province (38 - 31 - 34) First energy requirement on province (38 - 31 - 34) First energy requirement on province (38 - 31 - 34) First energy requirement on province (38 - 31 - 34)		Receipts of energy from:											
(b) Secondary: Order provinces Total receipts of energy to: (a) Firm energy available (24 + 29 - 34) Secondary energy delivered within province (35 - 36) Secondary energy available within province (35 - 36) Firm energy requirement on province (35 - 36) Firm energy requirement on province (35 - 36) Firm energy requirement on province (36 - 31 + 39) Secondary energy requirement on province (36 - 31 + 39) Secondary energy requirement on province (36 - 36) Firm energy requirement on province (36 - 31 + 39) Firm energy requirement on province (36 - 31 + 30 +	25.	(a) Firm: Other provinces United States	::	::	::	87	110	777	45	45	947	97	97
(a) Pirm: Other provinces Other province (35 - 34) Other province (35 - 34) Other province (35 - 34) Other province (37 - 34) Other prov	27.	(b) Secondary: Other provinces United States	: :	: :		16	, ,	66	: :		: :	: :	: :
(a) First: (b) Secondary: (b) Secondary energy deliveries of energy variable (24 + 29 - 34) Secondary energy available within province (35 - 36) Secondary energy available within province (37 + 38) Secondary energy requirement within province (37 + 38) Secondary energy requirement on province (37 + 38) Secondary energy requirement on province (37 + 38) Secondary available within province (37 + 38) Secondary energy requirement on province (30 + 31 + 39) Secondary energy requirement on province (30 + 31 + 39) Secondary energy requirement on province (30 + 31 + 39) Secondary energy requirement on province (30 + 31 + 39) Secondary energy requirement on province (30 + 31 + 39) Secondary energy requirement on province (30 + 31 + 39) Secondary energy energy requirement on province (30 + 31 + 39) Secondary energy energy requirement on province (30 + 31 + 39) Secondary energy energy requirement on province (30 + 31 + 39) Secondary energy energy requirement on province (30 + 31 + 39) Secondary energy energy energy requirement on province (30 + 31 + 39) Secondary energy	29.	Total receipts of	:	83	103	110	117	143	:	:	:	÷	:
(a) Firm: Other provinces United States (b) Secondary energy available (24 + 29 - 34) Secondary energy delivered within province (35 - 36) Firm energy requirement within province (37 + 38) Example (37 + 38) Cother provinces (b) Secondary energy available (24 + 29 - 34) Secondary energy delivered within province (35 - 36) Firm energy requirement within province (37 + 38) Firm energy requirement within province (37 + 38) Firm energy requirement within province (37 + 31 + 39) Firm energy requirement province (38 + 31 + 39) Firm energy requirement province (38 + 31 + 39) Firm energy requirement province (38 + 31 + 39) Firm energy requirement province (38 + 31 + 39) Firm energy requirement province (38 +		Deliveries of energy to:											
(b) Secondary: Other provinces United States	30.	(a) Firm: Other provinces United States	4,456	4,211	4,193	4,207	3,964	3,975	4,293	4,302	4,323	4,340	4,317
6,172 6,474 6,263 6,235 5,246	32.	(b) Secondary: Other provinces United States	: :	1,415	1,723	1,649	1,963	1,004	: :	: :	: :	: :	: :
38,538 43,902 43,573 44,011 44,716 4,503 5,350 4,551 3,622 2,613	34.	Total deliveries	:	6,172	6,474	6,263	6,235	5,246	:	:	:	:	÷
4,503 5,350 4,551 3,622 2,613	35.	Total energy available (24 + 29	:	38,538	43,902	43,573	44,011	44,716	:	:	÷	:	
. 23,189 34,035 33,552 39,022 40,389 42,103 44,826 48,310 50,834 . 215	36.		:	4,503	5,350	4,551	3,622	2,613	:	:	:	:	:
23,404 34,035 38,552 39,022 40,389 42,103 44,826 48,310 50,834 28,350 38,738 43,241 43,582 44,367 45,084 49,125 52,618 55,163	37.	province (35 - 36)		34,035	38,552	39,022	40,389	42,103	44,826	48,310	50,834	53,434	56,123
23,404 34,035 38,552 39,022 40,389 42,103 44,826 48,310 50,834) 28,350 38,738 43,241 43,582 44,367 45,084 49,125 52,618 55,163	38.	Indicated shortage	215	1	1	,	t	1	1	t	1	1	1
province (30 + 31 + 39) 28,350 38,738 43,241 43,582 44,367 46,084 49,125 52,618 55,163	39.	Firm energy requirement within province (37 + 38)	23,404	34,035	38,552	39,022	40,389	42,103	44,826	48,310	50,834	53,434	56,123
	40			38,738	43,241	43,582	44,367	48,084	49,125	52,618	55,163	57,780	977,09

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Ontario	IABLE	:	llity, Firm	n Power Pea	Capability, Firm Power Peak Load, and Energy Requirements	d Energy R	equirement	60				
				Actual	al					Forecast		
	Capability and peak load	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
						thousands	ls of kilowatts	watts				
	Capability:											
	Net generating capability:											
1.2	Hydro-electric	2,476	5,467	2,464	5,292	5,285	5,601 2,376	5,602	5,728 2,940	5,864	5,885	5,885 4,071
m ⊲* ທ່	Nuclear) Internal combustion) Gas turbine)	348	808	1,186	- 11	12	12	: co :	11	12	13	14
. 6	Total net generating capability	2,824	6,275	6,650	6,858	7,223	7,989	8,268	8,679	9,101	9,623	10,188
	Receipts of firm power from:											
7.	Other provinces	744	692	- 694	695	692	669	701	703	707	708	- -
.0	Total receipts	744	692	769	969	692	669	701	703	707	708	299
	Deliveries of firm power to:											
10.	Other provinces	1 85	2 86	2 86	986	89	88	88	45	45	47	47
12.	Total deliveries	86	88	88	91	91	06	06	47	47	67	67
13.	Total net capability (6 + 9 - 12)	3,482	6,879	7,256	7,462	7,824	8,598	8,879	9,335	9,761	10,282	10,806
	Peak loads:											
14.	Firm power peak load within province	3,292	6,154	6,391	6,615	6,913	7,412	7,852	8,282	8,770	9,280	9,790
16.	Total indicated firm power peak load within province (14 + 15)	3,611	6,154	6,391	6,615	6,913	7,412	7,852	8,282	8,770	9,280	9,790
17.	Firm power peak load on province (12 + 16)	3,697	6,242	6,479	902,9	7,004	7,502	7,942	8,329	8,817	9,329	9,839
18.	Indicated reserve: Indicated reserve (13 - 16)	- 129	725	865	847	911	1,186	1,027	1,053	166	1,002	1,016

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Ontario

Net perset (on by:					Actual	1				Fc	Forecast		
Secondary energy delivered within province (3) - 30, 30 - 30 - 30 - 30 - 30 - 30 - 30		Energy	1951	1959	1960	1961	1962	1963	1964	1965	1966	1961	1968
Stema						(8)		E kilowatt-	hours				
Steam - Conventional)		Net generation by: Hwdro-electric	•	32,301	34,870		30,872	29,099	:	:	:	:	•
Total receipts of energy from: (a) First number of energy from: (a) First number of energy from: (b) Secondary: number of energy from: (c) First number of energy from: (c) First number of energy from: (c) First number of energy from: (d) Secondary: number of energy from: (e) First number of energy for energy from: (e) Secondary: number of energy for en	20.	Steam - Conventional) Nuclear)				1,187	4,335	8,291	::		::	: :	0 0 0 7 0 0
Receipts of energy from: (a) First Other provinces (b) Secondary energy delivered within province (35 - 36). (c) First energy requirement within province (35 - 36). (d) Secondary energy delivered within province (37 - 36). (e) First energy requirement within province (37 - 36). (f) Secondary energy delivered within province (37 - 36). (g) Secondary energy delivered within province (37 - 36). (g) Secondary energy delivered within province (37 - 36). (h) Secondary energy delivered within province (37 - 36). (g) Secondary energy delivered within province (37 - 36). (h) Secondary energy delivered within province (37 - 36). (h) Secondary energy delivered within province (37 - 36). (h) Secondary energy delivered within province (37 - 36). (h) Secondary energy delivered within province (37 - 36). (h) Secondary energy delivered within province (37 - 36). (h) Secondary energy requirement within province (37 - 36). (h) Secondary energy equirement within province (37 - 36). (h) Secondary energy requirement within province (37 - 36). (h) Secondary energy requirement within province (37 - 38). (h) Secondary energy equirement within province (37 - 38). (h) Secondary energy equirement within province (37 - 38). (h) Secondary energy equirement within province (37 - 38). (h) Secondary energy equirement within province (37 - 38). (h) Secondary energy equirement within province (37 - 38). (h) Secondary energy equirement on province (37 - 38). (h) Secondary energy equirement of province (37 - 38). (h) Secondary equirement o	22.	•	:	976	822	31	29	24		: :	: :	::	::
(a) Etraic provinces (b) Secondary: (c) Secondary energy delivered within province (35 - 36) 3,536	24.	Total net generation		33,247	35,692		35,259	37,501	•	•	•	:	
(a) Firm: Online figures (b) Secondary: Conterprovinces (c) Secondary: Conterprovinces (c) Secondary: Conterprovinces (d) Firm: Conterprovince (35 - 36) (e) Firm: Conterprovince (35 - 36) (b) Secondary: Conterprovince (35 - 36) (c) Firm: Conterprovince (35 - 36) (d) Firm: Conterprovince (35 - 36) (e) Firm: Conterprovince (35 - 36) (f) Secondary energy evaluable (24 + 29 - 34) (g) Secondary energy evaluable (24 + 29 - 34) (g) Secondary energy evaluable (24 + 29 - 34) (g) Secondary energy evaluable (24 + 29 - 34) (g) Secondary energy evaluation province (35 - 36) (g) Secondary energy equirement within province (35 - 36) (g) Secondary energy requirement within province (35 - 36) (g) Secondary energy requirement within province (35 - 36) (g) Secondary energy requirement within province (35 - 36) (g) Secondary energy requirement within province (35 - 36) (g) Secondary energy requirement within province (35 - 36) (g) Secondary energy requirement within province (35 - 36) (g) Secondary energy requirement within province (35 - 36) (g) Secondary energy requirement within province (35 - 36) (g) Secondary energy requirement within province (35 - 36) (g) Secondary energy requirement within province (35 - 36) (g) Secondary energy requirement within province (35 - 36) (g) Secondary energy requirement within province (35 - 36) (g) Secondary energy requirement within province (35 - 36) (g) Secondary energy requirement within province (35 - 36) (g) Secondary energy requirement within province (35 - 36) (g) Secondary energy requirement within province (35 - 36) (g) Secondary energy energy		Receipts of energy from:											
(b) Secondary: Other provinces (c) Paccondary energy available (24 + 29 - 34) Potent receipts of energy to: (d) Secondary energy delivered within province (35 - 36). Secondary energy available (24 + 29 - 34) Prime energy requirement within province (35 - 36). Secondary energy requirement within province (35 - 36). Secondary energy requirement on province (30 - 31) so (3	25.	er provinces	::	: :	: :	4,188	3,943	3,954	4,270	4,277	4,295	4,310	4,284
Potal receipts of energy to: (a) Pirm:	27.	(b) Secondary: Other provinces United States		: :	::	1,649	2,009	1,008				::	::
(a) Firm energy available (24 + 29 - 34) Secondary energy delivered within province (35 - 36) Center provinces (b) Secondary energy available (24 + 29 - 34) Total energy available within province (35 - 36) Firm energy requirement within province (37 + 38) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) (a) Firm energy requirement on province (30 + 31 + 39) (b) Firm energy requirement on province (30 + 31 + 39) (c) Firm energy requirement on province (30 + 31 + 39) (d) Firm energy requirement on province (30 + 31 + 39) (e) Firm energy requirement on province (30 + 31 + 39) (f) Firm energy requirement on province (30 + 31 + 39) (g) Firm energy requirement on province (30 + 31 + 30 +	29.	Total receipts of	*	6,094	6,182	7,199	8,656	7,808	0 0	:		:	:
(b) Secondary energy delivered within province (35 - 36). Secondary energy delivered within province (35 - 36). Secondary energy requirement within province (37 - 36). Setondary energy requirement within province (37 - 36). Setondary energy requirement within province (37 + 38). Setondary energy requirement within province (37 + 38). Setondary energy requirement on province (37 + 38). Setondary energy equirement on province (37 + 39). Setondary energy equirement on province (37 + 38). Setondary energy equirement on province (38 + 31 + 39). Setondary energy		Deliveries of energy to:											
(b) Secondary: Other provinces Other provinces 3,154 4,043 2,909 2,875 2,406	30.	(a) Firm: Other provinces	703	710	727	642	635	672	652	453	392	10 400	10 408
Total deliveries of energy	32.	(b) Secondary: Other provinces	::	83	131	2,909	221 2,875	2,406		::		::	•
Secondary energy available (24 + 29 - 34) 485 585 511 546 437 485 585 511 546 437	34.	Total deliveries	:	3,952	4,907	3,833	3,738	3,343	:	:	:	:	:
within province (35 - 36) 20,395 34,904 36,382 37,727 39,631 41,529 44,311 46,615 49,397 52,378 This province (37 + 38) 20,492 34,904 36,382 37,727 39,631 41,529 44,311 46,615 49,397 52,378 This province (30 + 31 + 38) 21,198 35,619 37,115 38,376 40,273 42,209 44,972 47,077 49,799 52,788	35.	Total energy available (24 + 29	:	35,389	36,967	38,238	40,177	41,966	:	:			:
20,395 34,904 36,382 37,727 39,631 41,529 44,311 46,615 49,397 52,378 . 97 -	36.	within province	:	485	585	511	546	437	:	:	:	:	:
. 97	37.	- 36)		34,904	36,382	37,727	39,631	41,529	44,311	46,615	49,397	52,378	55,663
20,492 34,904 36,382 37,727 39,631 41,529 44,311 46,615 49,397 52,378) 21,198 35,619 37,115 38,376 40,273 42,209 44,972 47,077 49,799 52,788	38	Indicated shortage	97	•	,	1	1	a	1	1	1	1	1
province (30 + 31 + 39) 21,198 35,619 37,115 38,376 40,273 42,209 44,972 47,077 49,799 52,788	39	Firm energy requirement within province (37 + 38)	20,492	34,904	36,382	37,727	39,631	41,529	44,311	46,615	49,397	52,378	55,663
	40	Firm energy requirement on province (30 + 31 + 39)		35,619	37,115	38,376	40,273	42,209	44,972	47,077	49,799	52,788	56,081

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Manitoba

	foot door bon that			Actual	ıal					Forecast		
	מסלשמדודה) שוות המשע זמשת	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
						thousands of		kilowatts				
	Vapability:											
	ING											
- 2.	Hydro-e Steam -	413	266	. 701	735	735 291	735	945	1,050	1,050	1,050	1,050
า		10	168	231	,	1	1	1	,		'	
4.0	Internal combustion) Gas turbine)				4 1	7	7	∞ ι	00 I	9	6 1	6 1
6.	Total net generating capability	423	734	932	905	1,033	1,033	1,244	1,349	1,350	1,350	1,350
	Receipts of firm power from:											
7.00	Other provinces	77	72	98	833	87	134	84	84	84	84	84
.6	Total receipts	77	72	86	83	87	134	84	84	84	84	84
	Deliveries of firm power to:											
10.	Other provinces	6 1	, ,	1 1		' '	, ,		()	1 1		
12.	Total deliveries	6	1	•	1		4			ı	1	r
13.	Total net capability (6 + 9 = 12)	491	806	1,018	988	1,120	1,167	1,328	1,433	1,434	1,434	1,434
	Peak loads:											
14.	Firm power peak load within province	454	069	772	849	907	955	987	1,031	1,078	1,127	1,177
16.	Total indicated firm power peak load within province (14 + 15)	454	069	772	849	907	955	987	1,031	1,078	1,127	1,177
17.	Firm power peak load on province (12 + 16)	463	069	772	849	406	955	987	1,031	1,078	1,127	1,177
	Indicated reserve:											
18.	Indicated reserve (13 - 16)	37	116	246	139	213	212	341	402	356	307	257

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				Actual	ıaı				ম	Forecast		
	Energy	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
					B	millions of	of kilowatt-hours	-hours				
	Net generation by:											
19.	Hydro-electric	:	3,582	3,735	3,591	4,220	4,736	:	:	:	:	:
20.	Steam - Conventional)				(238	120	61	:	:	:	:	:
21.	Nuclear)	:	51	75	,	1		:	:	:	:	:
22.	Internal combustion) Gas turbine)				- 11	12	13	: :	: :	: :	: :	: :
24.	Total net generation		3,633	3,810	3,840	4,352	4,810	:	:	:	:	:
	Receipts of energy from:											
25.	(a) Firm: Other provinces United States		::	::	623	247	687	989	989	989	989	- 686
27.	(p) Se	::	::	::	301	199	198	::	::	: :	::	::
29.		:	652	739	924	978	885	*	:	•	:	
	Deliveries of energy to:											
30.	(a) Firm: Other provinces United States	79	1 1	1 1	1 5	29	ł į		1 T	1 1	()	
32.	(b) Secondary: Other provinces United States		m 1	4 1	4 1	949	65	• •			::	::
34.	Total deliveries of energy	:	m	7	9	75	65	:	:	:	:	:
35.	Total energy available (24 + 29 - 34)	:	4,282	4,545	4,758	5,123	5,630	:	:	:	:	:
36.	36. Secondary energy delivered within province	:	393	344	09	120	185	:	•	:	:	:
37.	37. Firm energy available within province (35 - 36)	2,443	3,889	4,201	4,698	5,003	5,445	5,658	5,868	6,111	6,366	6,636
38.	38. Indicated shortage	1	1	1	ı	1	1	1	1	1	,	,
39.	39. Firm energy requirement within province (37 + 38)	2,443	3,889	4,201	4,698	5,003	5,445	5,658	5,868	6,111	6,366	6,636
40.	40. Firm energy requirement on province (30 + 31 + 39)	2,522	3,889	4,201	4,700	5,032	5,445	5,658	5,868	6,111	998,9	6,636

				Actual	ıal					Forecast		
	Capability and peak load	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
						thousands	Jo	kilowatts				
ଔ	Capability:											
	Net generating capability:											
.2.	Hydro-electric	85	80	66	107	107 575	208	309	309	343	376	492
. 4·	Internal combustion)	160	583	653	35	37	36	36	35 2	, 26	35	35
	Total net generating capability	245	671	752	757	752	775	876	875	606	942	1,043
	Receipts of firm power from:											
. 8	Other provinces	1 1				1 1	1 1	1 1	1 1	1 1	3 1	1 1
9.	Total receipts	'	1	1	,	1	,	,	,	1	1	ı
	Deliveries of firm power to:											
10.	Other provinces	7.7	72	986	88	87	134	84	84	84	84	84
12.	Total deliveries	77	72	98	888	87	134	84	84	84	84	84
13.	Total net capability (6 + 9 - 12)	168	009	299	699	999	641	792	791	825	858	656
Å												
4 .51	East towns. Firm power peak load within province Indicated shortages	127	377	418	466	497	531	579	632	684	7117	808
16.	Total indicated firm power peak load within province (14 + 15)	127	377	418	994	497	531	579	632	684	711	809
17.	Firm power peak load on province (12 + 16)	204	677	504	554	584	999	663	716	768	795	893
H	Indicated reserve:											
18.	Indicated reserve (13 = 16)	17	6	1			;	-		:	!	-

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,			Actual	ual				E.	Forecast		
Energy	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Net generation by:					millions of kilowatt-hours	f kilowatt-	-hours				
Hydro-electric	:	586	620	658	704	985	:	:	:	:	:
Steam - Conventional)				(1,682	1,844	1,833	:	:	:	:	:
Nuclear) Internal combustion) Gas turbine)	:	1,498	1,659	109	97	106		: ::	: ::	: ::	: ::
Total net generation	:	2,084	2,279	2,511	2,682	2,973	•	:	:	:	:
Receipts of energy from:											
(a) Firm: Other provinces United States	::	: :	: :	1.1	29	1 1		1 1	1.1	1 1	1 1
(b) Secondary: Other provinces United States	0 4			1 00	f 1	62	: :	: :	: :	: :	: :
Total receipts of energy	:	œ	9	9	29	62	:	:	:	:	:
Deliveries of energy to:											
(a) Firm: Other provinces United States	515	517	575	621	-	687	989	989	989	989	686
(b) Secondary: Other provinces United States		78	44	41	1	7			:	:	:
Total deliveries of energy	•	595	619	662	647	691	•	:	:	:	:
Total energy available (24 + 29 - 34)	:	1,497	1,666	1,855	2,064	2,344	:	:	:		:
Secondary energy delivered within province	:	î	r	1	ı	17	:	:	:	:	:
. Firm energy available within province (35 - 36)	194	1,497	1,666	1,855	2,064	2,327	2,535	2,798	2,941	3,234	3,529
. Indicated shortage	ı	r	t	t	1	t	1	1	ı	1	1
. Firm energy requirement within province (37 + 38)	194	1,497	1,666	1,855	2,064	2,327	2,535	2,798	2,941	3,234	3,529
. Firm energy requirement on province (30 + 31 + 39)	982	2,014	2,241	2,476	2,711	3,014	3,221	3,484	3,627	3,920	4,215

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TABLE 1, Capability, Firm Power Peak Load, and Energy Requirements

Alberta

				A	Actual					Forecast		
	Capability and peak load	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
	Capability:					thou	thousands of kil	kilowatts				
	Net generating capability:											
H 61 66	Hydro-electric	162	238	318	327 (498 (-)	327	326 713	476	476	626 817	626	626
40	Internal Gas turb	109	530	607	(28	33	31 130	32 130	35	37 131	37	38 162
9	Total net generating capability	271	768	925	953	1,133	1,200	1,383	1,387	1,611	1,897	1,990
	Receipts of firm power from:											
7.	Other provinces	1 1	t 13	m 1	1 1	1 1	1 1	1 1	1 1	1 1	' '	1 1
9.	Total receipts	ı	٣	~	ŧ	ę	1	,	*	,	r	ŧ
	Deliveries of firm power to:											
10.	Other provinces	ī, ī	ent 1	- 1	δ. 1	4 ,	10	12	12	14	13	13
12.	Total deliveries	5	-	г	5	4	10	12	12	14	13	13
13.	Total net capability (6 + 9 - 12)	266	077	927	846	1,129	1,190	1,371	1,375	1,597	1,884	1,977
•	Peak loads:											
14.	Firm power peak load within province	220	649	714	836	882	786	1,066	1,154	1,244	1,342	1,445
16.	Total indicated firm power peak load within province (14 + 15)	220	649	714	836	882	786	1,066	1,154	1,244	1,342	1,445
17.	Firm power peak load on province (12 + 16)	225	650	715	841	886	766	1,078	1,166	1,258	1,355	1,458
18.	Indicated reserve: Indicated reserve (13 - 16)	97	121	213	112	247	206	305	221	353	542	532

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Actual 1955 1960 1961 1962 842 887 1,023 956 2,228 2,540 (2,534 2,900 (2,534 2,900 (165 187)	Alberta	a TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded	ility, Fi	rm Power Pe	ak Load, a	nd Energy F	lequiremen	its - Conc	luded		I		
Net generation by: Hydro-electric Nuclear 1,023 Steam - Conventional					Actu	al				Ţ	Forecast		
Net generation by: Steam - Conventional)		Energy	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Hydro-electric conventional)						ţa.	llions of	kilowatt	hours				
Steam - Conventional Nuclear N	Ň	et generation by:											
Steam - Conventional)		Hydro-electric	:	842	887	1,023	926	881	*	•	:	*	i
Nuclear Nucl		Steam - Conventional)				(2,534	2,900	3,294	:	:	:	0 0	:
Compared combustion Compared compar	:	~ ~	:	2,228	2,540		1	ı	:	:	:	:	:
Total net generation 3,070 3,427 3,773 4,102				-		(51	59 187	60 257			: :		
(a) Firm: (b) Secondary: (a) Firm: (b) Secondary: (b) Secondary to: (c) Firm: (a) Firm: (b) Secondary: (c) Firm: (c) Firm: (d) Firm: (e) Firm: (e) Firm: (f) Secondary: (f) Secondary: (g) Firm: (g) Firm: (h) Secondary:		Total net generation	÷	3,070	3,427	3,773	4,102	4,492	:	:	:	:	:
(a) Firm: (b) Secondary: Other provinces United States United	1												
(a) Firm: (b) Secondary: (b) Secondary condary states	×	eceipts of energy from:											
(a) Firm: (a) Firm: Other provinces Total receipts of energy to: (b) Secondary: (c) Total energy available (24 + 29 - 34) Firm energy available within province (35 - 36) . 1,114 3,097 3,452 3,808 4,121 1nddcated shortage		(a) Firm: Other provinces	::	::	::	9 1	23	7 1	9 1	1 0	7 -	7 :	60 1
(a) Firm: (b) Secondary: (b) Secondary energy available (24 + 29 - 34) Secondary energy delivered within province (35 - 36). 10 Total energy available (35 - 36).		ovincestates	: :		: :	30	ę	23	: :		::	: :	: :
(a) Firm: Other provinces Total deliveries of energy Total energy available (24 + 29 - 34) Secondary energy delivered within province (35 - 36)		Total receipts of energy	:	34	30	36	23	27	:	•	:	:	:
(a) Firm: Other provinces United States (b) Secondary: Other provinces United States Total deliveries of energy Total energy available (24 + 29 - 34) Secondary energy delivered within province (35 - 36) Firm energy evailable within province (35 - 36) Indicated shortage Indicated shortage	—	Deliveries of energy to:											
(b) Secondary: Other provinces United States Total deliveries of energy 7 5 1 4 Total energy available (24 + 29 - 34) 3,097 3,452 3,808 4,121 Secondary energy delivered within province (35 - 36) 1,114 3,097 3,452 3,808 4,121 Indicated shortage	0:	r provincesed States	20	νı	m I	← 1	4 1	1 1	1 1	1 1	1 1	1 1	1 1
36) · 1,114 3,097 3,452 3,808 4,121	3.5	ovinces	:	2	2	1	F	ŧ	:	:	:	:	:
36) •• 34)	4.		:	7	۲O	1	4	,	:	:	:	:	:
36) •• 1,114 3,097 3,452 3,808 4,121	5.	Total energy available $(24 + 29 = 34)$:	3,097	3,452	3,808	4,121	4,519	:	:			÷
province (35 - 36) · · 1,114 3,097 3,452 3,808 4,121	. 9	Secondary energy delivered within province	;	r	t	t	1	t	:	:	:	:	÷
	7.		1,114	3,097	3,452	3,808	4,121	4,519	4,933	5,326	5,740	6,188	6,663
:	. 00		:	ı	•	t	ı	t	1	1	t	ı	ı
39. Firm energy requirement within province (37 + 38) 1,114 3,097 3,452 3,808 4,121 4,51	. 6	Firm energy requirement within province (37 + 38)	1,114	3,097	3,452	3,808	4,121	4,519	4,933	5,326	5,740	6,188	6,663
40. Firm energy requirement on province (30 + 31 + 39) 1,134 3,102 3,455 3,809 4,125 4,51	0.	Firm energy requirement on province $(30 + 31 + 39)$	1,134	3,102	3,455	3,809	4,125	4,519	4,933	5,326	5,740	6,188	6,663

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

British Columbia

				Actual	a1					Forecast		
	Capabliky and peak load	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
	Capabálity:					thousand	thousands of kilowatts	watts				
	Net generating capability:											
2,	Hydro-electric Steam - Conventional)	806	2,524	2,659	2,672	2,599	2,670	2,670 630	2,674 634	2,764	2,764	3,094
. 4. w		107	353	369	(109 (172	- 112 172	106	- 1118 177	- 117 177	117	- 117 771	_ 711 771
9	Total net generating capability	1,015	2,877	3,028	3,070	3,307	3,428	3,595	3,602	3,695	3,865	4,197
	Receipts of firm power from:											
7.8	Other provinces	70 1	1 1	1 1	t Or	7	10	12	12	13	13	13
9.	Total receipts	2	t	1	5	7	10	12	12	13	13	13
	Deliveries of firm power to:											
10.	Other provinces	30	e ا	en t	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
12.	Total deliveries	30	en	en	'	1	1	1	. 1	•	ı	1
13.	Total net capability (6 + 9 - 12)	066	2,874	3,025	3,075	3,311	3,438	3,607	3,614	3,708	3,878	4,210
	Peak Loads:											
14. 15.	Firm power peak load within province Indicated shortages	861	1,963	2,123	2,368	2,317	2,537	2,780	2,921	3,018	3,204	3,307
16.	Total indicated firm power peak load within province (14 + 15)	198	1,963	2,123	2,368	2,317	2,537	2,780	2,949	3,088	3,290	3,395
17.	Firm power peak load on province (12 + 16)	891	1,966	2,126	2,368	2,317	2,537	2,780	2,949	3,088	3,290	3,395
	Indicated reserve:											
18.	Indicated reserve (13 - 16)	129	911	902	707	766	901	827	599	620	588	815

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

British Columbia

				Actual	al				FC	Forecast		
	Energy	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
					ie	millions of kilowatt-hours	kilowatt-	hours				
и 19.	Net generation by: Hwdro-electric	:	11,673	12,584	12,295	13,500	14,194	•		:	:	0 4 6
20.	Steam - Conventional)				535	999	780	:	:	•	*	:
21.	Nuclear) Internal combustion) Gas turbine)	:	603	729	246 (246 (10	261	300					
24.	Total net generation	•	12,276	13,313	13,086	14,429	15,279	•	•	•	o o a	
	Receipts of energy from:											
25.	(a) Firm: Other provinces United States	::	::	• •	ed ed	1 4	1 (1 1	1 1	i t	1 1	1 1
27.	(b) Secondary: Other provinces United States	: :	: :	::	16	57	19					
29.	Total receipts of energy	:	30	72	18	62	19	•	•	:	:	:
	Deliveries of energy to:											
30.	(a) Firm: Other provinces	184	9 1	e 8	9 6	23	4 0	١٥	v 0 1	۲.	L 1	CO 1
32.	(b) Secondary: Other provinces United States		28	27	30	14	23					
34.	Total deliveries of energy		48	84	55	39	84	•		:		:
35.	Total energy available (24 + 29 - 34)	:	12,258	13,337	13,049	14,452	15,250	:	•			:
36.	36, Secondary energy delivered within province	;	167	233	242	230	268	:	•	:	:	:
37.	37. Firm energy available within province (35 - 36)	4,741	12,091	13,104	12,807	14,222	14,982	16,536	17,652	18,605	19,603	20,471
38	38. Indicated shortage	*	1	1	ı	1	1	1	1	ı	ı	1
39	39. Firm energy requirement within province (37 + 38)	4,741	12,091	13,104	12,807	14,222	14,982	16,536	17,652	18,605	19,603	20,471
40	40. Firm energy requirement on province (30 + 31 + 39)	4,925	12,097	13,109	12,815	14,247	14,988	16,542	17,658	18,612	19,610	20,479
1												

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Yukon and Northwest Territories

	And the state of t			Ac	Actual					Forecast		
	vapability and peak load	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
						thousa	thousands of kilowatts	Owatts				
	Capability:											
	Net generating capability:											
3.5.	Hydro-electric	21	37	77	44	4 ⁴ 1 .	444	44 1	44	44	44	444
4.5	Internal combustion) Gas turbine	1	4	11	(10	10	11	12	12	12	12	12 1
6.	Total net generating capability	21	41	55	55	55	56	58	58	58	58	58
	Receipts of firm power from:											
7.	Other provinces	1 1	1 1		1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
0,	Total receipts	4	,	1	1	-	,	,	1	,	1	,
	Deliveries of firm power to:											
10.	Other provinces	1 1	1 1	, ,		1 1		, ,	1 /	1 1	1 1	1 1
12.	Total deliveries	9	1	\$	ı	1	,	•	,	ı	1	,
13.	Total net capability (6 + 9 - 12)	21	41	55	55	55	56	58	58	58	58	58
	Posk Inade.											
14.	Firm power peak load within province	14	31	34	29	32	3.5	3.5	3.5	33	33	23
15.	Indicated shortages Total indicated firm power peak load within province (14 + 15)	14	- 1	1 26	- 50	33	1 0	1 60	1 66	c c	1 6	
17.	Firm power peak load on province (12 + 16)	14	31	34	29	32	32	32	32	32	32 32	32
18.	Indicated reserve: Indicated reserve (13 - 16)	7	10	21	26	23	24	26	26	26	26	26

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

TABLE 2. Total Net Generating Capability within Provinces(1)

tinge Laberadors) 200 257 309 311 409 496 497 502 504 515 515 7.86 16.73 15.89 16.73 15.73 15.89 16.73 15.89 16.73 15.73 1										Forecast			Percer (com	Percentage change (compounded)	egu
dtng_Labrador) 200 267 309 311 409 496 52 58 58 58 78 78 16.75 d 248 499 506 521 532 537 570 668 669 837 1.92 248 499 506 521 532 537 570 668 669 837 8.53 1.92 248 499 506 521 532 537 570 668 669 837 8.53 1.92 248 499 506 521 522 7.989 8.268 8.679 9.101 9.622 10.188 9.05 6.22 248 6.275 6.650 6.858 7.223 7.989 8.268 8.679 9.101 9.622 10.188 9.05 6.22 242 6.275 6.650 6.858 7.223 7.989 8.268 8.29 9.101 9.623 1.930 1.350	Province	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1951 1963	1959 1963	1963 1968
ding Labrador) 200 267 309 311 409 496 497 552 594 515 515 7.86 16.75 d 18 25 38 37 37 37 58 52 52 52 52 56 57 668 663 6.57 1.92 4,613 7,681 8,784 8,738 8,919 9,376 9,711 10,494 11,195 11,699 6.09 5.12 4,613 7,681 8,784 8,738 8,919 9,376 9,711 10,494 11,195 11,699 6.09 5.12 4,613 7,681 8,784 8,738 8,919 9,376 9,711 10,494 11,390 11,390 11,390 1,300 1,367 4,613 7,681 8,784 8,738 8,919 9,376 9,711 10,494 11,195 11,699 6.09 5.12 4,613 7,681 8,784 8,738 1,033 1,033 1,244 1,349 1,350 1,350 1,350 1,350 1,350 1,350 1,367 3,677 4,613 7,681 8,784 8,738 1,033 1,033 1,244 1,349 1,350 1,350 1,350 1,350 1,350 1,350 1,360 1,367 3,685 1,067 1,067 5,078 8,798 1,087 1,08						thousar	of	owatts							
d 18 25 38 36 58 58 58 78 78 10,24 23,41 d 49 508 521 532 627 657 668 668 669 837 1,924 23,41 m 4,613 7,681 8,764 8,738 8,919 9,376 9,711 10,494 10,941 11,195 11,699 6.09 5,122 6.23 6.59 6.919 9,210 9,711 10,494 10,941 11,195 11,699 6.09 5,122 6.23 6.68 6.69 8.93 9,43 6.09 5,122 9,711 10,494 10,941 11,195 11,699 6.09 5,122 6.27 6.68 6.69 8.919 9,121 10,494 10,941 11,195 11,699 6.09 5,122 10,44 10,941 11,195 11,699 6.09 5,122 10,44 10,941 11,195 11,699 6.09 9,122 11,244 11,349		200	267	309	311	607	967	497	502	504	515	515	7.86	16.75	0.75
		18	25	38	37	37	28	80	58	58	78	78	10,24	23.41	6,10
198 373 388 436 480 535 570 668 669 837 8,63 9,43 4,613 7,681 8,764 8,738 8,919 9,376 9,711 10,494 10,941 11,195 11,699 6.09 5,12 2,824 6,775 6,650 6,838 7,223 7,989 8,268 8,679 9,101 9,623 10,188 9.05 6.22 423 734 932 905 1,033 1,244 1,349 1,350 1,350 1,350 1,350 1,350 1,372 8.91 245 671 752 757 775 875 875 875 875 909 942 1,043 10.07 3,67 1,015 2,877 3,028 3,070 3,307 3,428 3,595 3,602 3,695 3,695 4,197 10.67 4,25 1,015 2,877 3,262 23,695 3,695 3,695 3,695 3,695 3,695 3,695 3,698 </td <td>:</td> <td>248</td> <td>493</td> <td>667</td> <td>508</td> <td>521</td> <td>532</td> <td>532</td> <td>627</td> <td>657</td> <td>899</td> <td>683</td> <td>6,57</td> <td>1,92</td> <td>5,13</td>	:	248	493	667	508	521	532	532	627	657	899	683	6,57	1,92	5,13
	0 0 0 0 0 0 0 0	198	373	388	436	780	535	537	570	899	699	837	8,63	9.43	9,36
2,824 6,275 6,650 6,886 7,223 7,989 8,268 8,679 9,101 9,623 10,188 9.05 6.22 423 734 932 905 1,033 1,244 1,349 1,350 1,350 1,350 7.72 8.91 245 671 752 757 752 775 876 875 909 942 1,043 10.07 3.67 271 768 925 953 1,133 1,200 1,387 1,611 1,897 1,990 13.20 11.81 1 Territories 2,877 3,028 3,070 3,307 3,428 3,695 3,695 3,865 4,197 10.67 4,25 Territories 20,076 20,205 22,340 22,478 26,759 28,201 29,552 30,860 32,638 8,04 5,97		4,613	7,681	8,764	8,738	8,919	9,376	9,711	10,494	10,941	11,195	11,699	60.9	5.12	4.53
423 734 932 905 1,033 1,244 1,349 1,350 1,350 1,350 7.72 8.91 10,07 245 671 752 757 775 775 876 875 909 942 1,043 10.07 3,67 10,07 3,028 925 953 1,133 1,200 1,383 1,887 1,611 1,897 1,990 13.20 11.81 1 10,07 3,028 3,070 3,307 3,428 3,595 3,602 3,695 4,197 10.67 4,25 Territories 21 41 55 55 56 58 58 58 58 58 8,04 5,97 10,076 20,205 22,340 22,628 23,478 26,759 28,201 29,552 30,860 32,638 8,04 5,97		2,824	6,275	6,650	6,858	7,223	7,989	8,268	8,679	9,101	9,623	10,188	9.05	6.22	4.98
Territories 10,076 20,205 22,340 22,628 23,869 25,478 875 875 909 942 1,043 10.07 3.67 3.67 10.07 3.67 10.07 3.67 10.07 3.67 10.07 3.67 10.07 3.67 10.07 3.67 10.07 3.689 25,478 26,759 28,201 29,552 30,860 32,638 8.04 5.97		423	734	932	905	1,033	1,033	1,244	1,349	1,350	1,350	1,350	7.72	8.91	5,50
Territories 10,076 20,205 22,340 22,628 23,869 25,478 26,759 28,201 29,552 30,860 32,638 8.04 5.97	•	245	671	752	757	752	775	876	875	606	942	1,043	10.07	3,67	6,12
Territories 1,015 2,877 3,028 3,070 3,307 3,428 3,595 3,602 3,695 3,865 4,197 10.67 4,25 Territories 21 41 55 55 55 56 58 58 58 58 58 58 8.35 8,11	•	271	768	925	953	1,133	1,200	1,383	1,387	1,611	1,897	1,990	13.20	11,81	10,64
Territories 21 41 55 55 55 56 58 58 58 58 58 58 8.32 8.11		1,015	2,877	3,028	3,070	3,307	3,428	3,595	3,602	3,695	3,865	4,197	10.67	4.25	4.13
	Yukon and Northwest Territories	21	41	55	55	55	56	58	58	58	58	58	8,52	8,11	0,71
(1) Table 1, Item 0,		10,076	20,205	22,340	22,628	23,869	25,478	26,759	28,201	29,552	30,860	32,638	8.04	5.97	6,39

TABLE 3, Firm Power Peak Load within Provinces(1)

Province 1951 1959 1960 1961 1962 1963 1964 1964 1967 1964 1964 1964 1965 1964 1964 1965 1964 1965 1964 1965 1964 1965 1965 1965 1964 1965			Forecast			Percei (cor	Percentage change (compounded)	ange (
182 231 245 242 294 349 389 185 330 356 347 388 411 438 3,462 5,466 5,871 6,258 6,370 7,118 7,653 3,292 6,154 6,391 6,615 6,913 7,412 7,852 127 377 418 466 497 531 7,106 127 377 418 466 497 531 7,106 861 1,963 2,123 2,368 2,317 2,537 2,780 14 31 34 29 32 32 32 32	1962	1964 1965	1966	1967	1968	1951	1959	1963 1968
182 231 245 242 294 349 389 11 21 24 25 27 30 11 21 24 25 27 30 11 330 356 347 388 411 438 11 3462 5,466 5,871 6,256 6,370 7,118 7,653 11 454 690 772 849 907 955 987 11 454 690 772 849 907 955 987 11 454 690 772 849 907 955 987 11 454 690 772 849 907 955 987 11 453 418 466 497 531 579 11 453 2,358 2,317 2,537 2,780 11 31 34 29 32 32 32 12 31 32 32 32 32	thousands of kil.	owatts						
8 19 21 24 25 27 30 185 330 356 347 388 411 438 184 291 319 347 388 401 458 184 291 319 347 401 458 184 291 319 347 401 458 185 5,871 6,256 6,370 7,118 7,653 186 5,871 6,615 6,913 7,412 7,852 187 456 6,913 7,412 7,852 188 466 497 531 579 188 1,963 2,123 2,368 2,317 2,537 2,780 188 1,963 2,123 2,368 2,317 2,537 2,780 188 188 29 32 32 32 32 32 189 31 34 29 32 32 32 32 32	294	389 456	997 9	466	481	5.58	10.87	6.62
185 330 356 347 388 411 438 28 319 347 401 458 34 462 5,466 5,871 6,258 6,370 7,118 7,653 3 462 5,466 5,871 6,615 6,913 7,412 7,852 9 454 690 772 849 907 955 987 9 454 690 772 849 907 955 987 9 454 690 772 849 907 955 987 9 70 454 690 714 866 497 531 579 9 10 454 690 714 836 882 984 1,066 10	2.5	30 33	3 35	38	40	10.67	9,18	8,17
184 291 319 347 401 458 3,462 5,466 5,871 6,258 6,370 7,118 7,653 3,292 6,154 6,391 6,615 6,913 7,412 7,852 454 690 772 849 907 955 987 127 377 418 466 497 531 579 220 649 714 836 882 984 1,066 861 1,963 2,123 2,368 2,317 2,537 2,780 14 31 34 29 32 32 32 32	388	438 466	6 488	517	547	6,88	5, 63	5,89
3,462 5,466 5,871 6,258 6,370 7,118 7,653 3,292 6,154 6,391 6,615 6,913 7,412 7,852 454 690 772 849 907 955 987 127 377 418 466 497 531 579 220 649 714 836 882 984 1,066 861 1,963 2,123 2,368 2,317 2,537 2,780 14 31 34 29 32 32 32 32	347	458 496	6 539	575	615	6,73	8.34	8,94
3,292 6,154 6,391 6,615 6,913 7,412 7,852 454 690 772 849 907 955 987 127 377 418 466 497 531 579 220 649 714 836 882 984 1,066 861 1,963 2,123 2,368 2,317 2,537 2,780 14 31 34 29 32 32 32	6,370	7,653 8,102	2 8,599	9,046	9,546	6.19	7,19	6,05
wan. 454 690 772 849 907 955 987 wan. 127 377 418 466 497 531 579 columbia. 220 649 714 836 882 984 1,066 columbia. 861 1,963 2,123 2,368 2,317 2,537 2,780 d Northwest Territories. 14 31 34 29 32 32 32	6,913	7,852 8,282	2 8,770	9,280	9,790	7.00	4.75	5.73
	907	987 1,031	1 1,078	1,127	1,177	6,40	8,46	4.26
220 649 714 836 882 984 1,066 861 1,963 2,123 2,368 2,317 2,537 2,780 14 31 34 29 32 32 32	497	579 632	2 684	711	809	7.62	8,93	8,80
861 1,963 2,123 2,368 2,317 2,537 2,780 14 31 34 29 32 32 32 32	882	1,066 1,154	4 1,244	1,342	1,445	13,33	11.07	7,91
14 31 34 29 32 32	2,317	2,780 2,921	1 3,018	3,204	3,307	9.42	6,62	5,46
	32		32 32	32	32	7,13	0.79	00.00
Canada	18,972	22,265 23,605	5 24,953	26,338	27,789	7.24	6,39	6,01

TABLE 4. Firm Energy Requirement within Provinces(1)

Forecast (compounded)	1966 1967 1968 1951 1959 1963 1968	5 2,206 2,241 2,293 5.05 11,51 4,08	138 147 158 10,36 11,81 7.31	5 2,519 2,662 2,769 6.14 6.62 5.70	2 3,013 3,269 3,450 6,34 8.05 10.50	50,834 53,434 56,123 5.02 5.46 5.92	5 49,397 52,378 55,663 6.06 4.45 6.03	3 5,611 6,366 6,636 6,91 8,78 4,04	3 2,941 3,234 3,529 14,32 11,65 8,69	5 5,740 6,188 6,663 12,38 9,90 8.07	2 18,605 19,603 20,471 10,06 5,50 6,44	2 163 166 168 8,21 4,00 0,36	3 141,667 149,688 157,923 6.38 5.66 6.14
	1964 1965	of kilowatt hours 1,878 1,927 2,156	120 129	2,212 2,345	2,308 2,752	44,826 48,310	44,311 46,615	5,658 5,868	2,535 2,798	4,933 5,326	16,536 17,652	168 162	125,534 134,113
	1963	ns of kilow	111	2,100	2,095	42,103	41,529	5,445	2,327	4,519	14,982	165	117,254
	1962	millions 1,473	3 101	1,965	1,912	2 40,389	7 39,631	3 5,003	5 2,064	3 4,121	7 14,222	3 162	5 111,043
	1961	0 1,361	88	4 1,775	4 1,782	2 39,022	2 37,727	1 4,698	6 1,855	2 3,808	4 12,807	8 153	2 105,076
3	1960	1,320		1,714	1,674	38,552	36,382	4,201	1,666	3,452	13,104	138	102,282
	1959	0 1,215	4 71	7 1,626	2 1,537	4 34,035	2 34,904	3 3,889	7 1,497	4 3,097	1 12,091	4 141	8 94,103
	1951	1,040	34	1,027	1,002	23,404	20,492	2,443	467	1,114	4,741	64	55,828
	Province	Newfoundland (including Labrador)	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and Northwest Territories	Canada

TABLE 5. Indicated Reserve(1)

										Forecast			Perce (cc	Percentage change (compounded)	ange
	Province	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1951 1963	1959	1963 1968
						thousands	jo	kilowatts							
21	Newfoundland (including Labrador):														
1. 2.	Gross capability	200	267 238	309	311	307	496	497	502	504	515 476	515 491	7.86	16.75	0,75
e «	Indicated reserve (1 - 2)	18	29	20	56	102	109	86	36	28	39	24	:	:	:
÷	indicated reserve expressed as a per cent of firm power peak load	6.6	12.2	19,3	22.0	33.2	28.2	24.6	7.7	5.9	8.2	4.9	:	:	:
best (Prince Edward Island:														
1.	Gross capability	18	25	38	37 24	37	58	30	33.88	35	78	78	10.24	23,41	6,10
e s	Indicated reserve (1 - 2)	10	9	17	13	12	31	28	25	23	40	38	•	•	*
ŧ.	indicated reserve expressed as a per cent of firm power peak load	125.0	31.6	81.0	54.2	48.0	114.8	93,3	75.8	65.7	105.3	95.0	:	:	:
	Nova Scotia:														
1.	Gross capability	248	493	499	508 348	521 389	532	532	627	657 488	668	683	6.57	1,92	5.13
ů,	Indicated reserve (1 - 2)	59	160	140	160	132	120	94	136	169	151	136		:	:
ŕ	indicated reserve expressed as a per cent of firm power peak load	31,2	48.0	39.0	46.0	33.9	29.1	21.5	27.7	34.6	29.2	24.9	:	:	:
	New Brunswick:														
1.	Gross capability	200	380	395	442	488	542	544	604	677 579	679	847	8.66	9,28	9.34
3,	Indicated reserve (1 - 2)	12	80	53	101	113	113	52	69	86	09	184	÷	:	÷
•	cent of firm power peak load	6.4	26.7	15,5	29,6	30,1	26.3	10.6	12.9	16,9	7.6	27.8	:	:	:
E	(1) Gross canability (Table 1 items 6 + 9).	f twm	Jaon rown	1 cad	oochanowe co	or (Table	1 4+000	177.		T) 0	Toble 1	19)			

(1) Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18).

TABLE 5. Indicated Reserved(1) - Continued

TABLE 5,

1										Forecast			Percer (com	Percentage change (compounded)	ıge
	Province	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1951 1963	1959	1963 1968
						thous	thousands of	kilowatts							
	Quebec:														
2°	Gross capability	4,614	7,690 6,219	8,780	8,759	8,936	9,388	9,723	10,506	10,953	11,207	11,711	6.10	5,12	4,51 5,50
€. 4	Indicated reserve (1 - 2)	361	1,471	2,154	1,767	1,865	1,561	1,358	1,689	1,636	1,440	1,485	•	*	
	cent of firm power peak load	80.	23,7	32.5	25.3	26.4	19.9	16.2	19.2	17.6	14.7	14.5	:	:	:
	Ontario:														
1:	Gross capability	3,568	6,967	7,344 6,479	7,553	7,915	8,688	8,969	9,382	9,808	10,331 9,329	10,855	7.70	5,68	4,55 5,58
e, «	Indicated reserve (1 - 2)	- 129	725	865	847	911	1,186	1,027	1,053	991	1,002	1,016		*	
*	indicated reserve expressed as a per cent of firm power peak load	•	11.6	13.4	12.6	13.0	15.8	12.9	12.6	11.2	10,7	10,3	:	:	:
	Manitoba:														
1.	Gross capability	500	806	1,018	988	1,120	1,167	1,328	1,433	1,434	1,434	1,434	7.32	9,70	4.21
φ, .		37	116	246	139	213	212	341	402	356	307	257	•	:	:
÷	cent of firm power peak load	8.0	16.8	31.9	16.4	23.5	22.2	34.5	39.0	33.0	27.2	21.8	:	•	•
	Saskatchewan:														
1.	Gross capability	245	672	753	757 554	752 584	775	8.7.6 663	875 716	906	942	1,043	10.07	3,62	6, 12 6, 08
e «		41	223	249	203	168	110	213	159	141	147	150	:	:	
ŕ	cent of firm power peak load	20.1	49.7	4°67	36.6	28.8	16.5	32.1	22.0	18,4	18,5	16,8	:	:	:
E	(1) Constant (maple 1 1 1 1 1 1 1 1 1 1			1 1 1 1		/ 8 1 2				,					

⁽¹⁾ Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18).

TABLE 5. Indicated Reserve(1) - Concluded

									N	Forecast			Percen (com)	Percentage change (compounded)	egu
	Province	1951	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1951 1963	1959 1963	1963 1968
						thous	thousands of k	kilowatts							
∢	Alberta:														
1.	Gross capability	271 225	771 650	928	953	1,133	1,200	1,383	1,387	1,611	1,897	1,990	13.20	11,69	10,64
ന്	Indicated reserve (1 - 2)	94	121	213	112	247	206	305	221	353	542	532	:	:	:
4.	Indicated reserve expressed as a per cent of firm power peak load	20.4	18.6	29,8	13.3	27.9	20.2	28.3	19.0	28.1	40.0	36,5	:	:	:
	British Columbia:														
1.	Gross capability	1,020	2,877	3,028	3,075	3,311	3,438	3,607	3,614 2,949	3,708	3,878	3,395	9,11	4,56	4.15
ന് -		129	911	905	707	966	106	827	665	620	280	815	0 0	:	:
4.	Indicated reserve expressed as a per cent of firm power peak load	14.5	46.3	45.4	29.9	45.9	35,5	29,7	22.6	16.8	17.9	24.0	:	:	:
	Yukon and Northwest Territories:														
1.	Gross capability	21	41	34	29	32	32	32	32	32	32	32	8,52	8,11	0,00
ů	Indicated reserve (1 - 2)	7	10	21	26	23	24	26	26	26	26	26	•	:	
4.	Indicated reserve expressed as a per cent of firm power peak load	50.0	32.3	61.8	98°7	71.9	75.0	81,3	81.3	81.3	81.3	81.3	:		
	Canada:														
2.	Gross capability	10,076 ^r 9,485 ^r	20,205	22,340 17,430	22,630 18,499	23,873 ^r 19,093	25,480	26,761	28,204 23,723	29,555 25,114	30,863 26,521	32,641 27,978	8.04	5.97	5.08
m°		591	3,852	4,910	4,131	4,780r	4,573	4,369	4,481	4,441	4,342	4,663	•	:	:
4.	Indicated reserve expresse cent of firm power peak	6,2	23.5	28.2	22.3	25.0 ^r	21.9	19.5	18.9	17.7	16.4	16.7	:	*	•
1	2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	. E.1	000	o lond o	or property	of (Table	1 4+om	17). 4nd4	cated res	prvo (Tab	le 1 frem	18).			

(1) Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18).

The Revised figures.

GLOSSARY OF TERMS

Firm Energy Requirement

Energy required to meet firm obligations, or for use in cwn industrial plant other than in electric boilers.

Firm Power

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

Firm Power Peak Load

The annual Firm Power maximum average net kilowatt load of one hour duration within the Utility, System or Industrial Establishment.

Firm Obligations

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis or the best estimate of firm obligations in the absence of contracts.

Indicated Demand

The sum of firm power peak load and indicated shortage.

Indicated Reserve

Net capability less indicated firm power peak load within the province or gross capability less firm power peak load on the province.

Industrial Establishment

A firm which generates power primarily for use in its own plants.

Net Generating Capability

The maximum net kilowatt output (after station service) available from the generating facilities of the Utility, System or Industrial Establishment with all equipment available, at the time of the annual Firm Power Peak Load, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

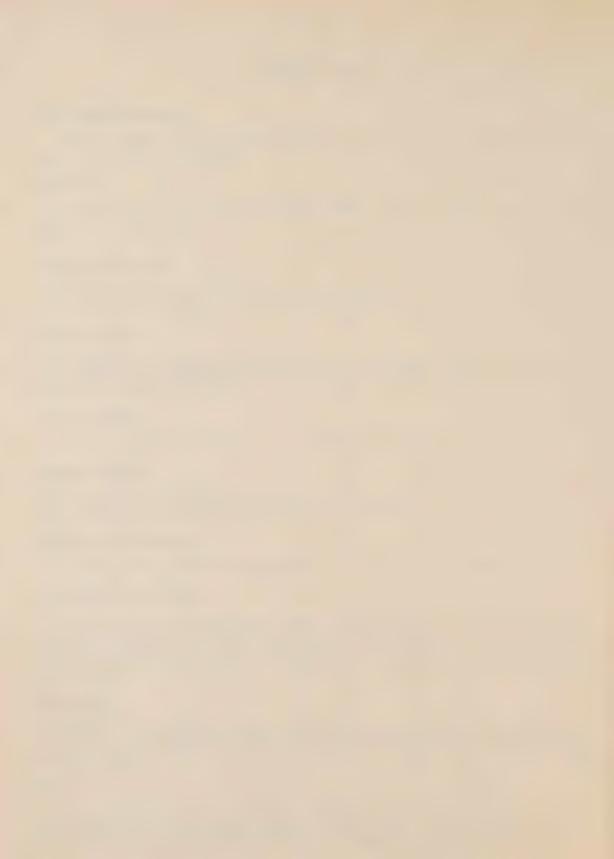
Net Capability

The sum of net generating capability and purchases of firm power under firm obligation from other utilities less deliveries of firm power under firm obligation to other utilities.

System

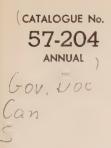
Two or more Utilities, Industrial Establishments or a combination of these, having interconnections for the exchange of power, which although they may be separately incorporated, are controlled, managed or operated by one principal.













ANNUAL ELECTRIC POWER SURVEY OF CAPABILITY AND LOAD

1964 Actual 1965 - 1969 Forecast



DOMINION BUREAU OF STATISTICS



DOMINION BUREAU OF STATISTICS

Industry Division
Energy Statistics Section

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1964 **A**ctual 1965 - 1969 **F**orecast

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	Includes an annual index of electricity bills for domestic service, and bills for light and power in cities and representative municipalities	.50
57-204	Electric Power Survey of Capability and Load. Approx. 50pp.	
	Current and projected data of capability and load of major producers of electric energy in Canada	.75
	Monthly	
57-001	Electric Power Statistics. Approx. 4pp.	
	Production by utilities and industrial establishments, imports and exports, power made available for use in Canada, amount used in electric boilers, by provinces. Per copy 10¢; per year	\$1.00
	Occasional	
57-502	Inventory of Prime Mover and Electric Generating Equipment. Approx. 120pp.	
	A list of generating plants in Canada by ownership showing the location, year of installation, name-plate rating and other details of each unit, as at December 31, 1961	\$1.50

TABLE OF CONTENTS

		Page
Int	croduction	5
	<u>CHARTS</u>	
Α.	Total Generating Capability within Canada This chart graphically portrays the rapid growth in ability to produce power and shows the extent to which thermal generation is becoming increasingly important.	8
В.	Net Capability and Peak Loads within Canada	9
C.	Net Generating Capability within Provinces	10
D.	Net Capability and Firm Demand within Provinces	12
Ε.	Firm Energy Requirement within Canada	14
	<u>TABLES</u>	
1.	Capability, Firm Power Peak Load and Energy Requirements	16
2.	Total Net Generating Capability within Provinces	40
3.	Firm Power Peak Load within Provinces This table compares rates of growth of firm power peak load within provinces.	41
4.	Firm Energy Requirement within Provinces This table compares rates of growth of firm energy requirement within provinces.	42
	Indicated Reserve This table shows the relationship between the demand for power and the ability to meet it in each of the provinces and in Canada as a whole.	43
G1c	ossary of Terms	46
Can	adian Electrical Association - Electric Power Statistics Committee Personnel 1964-1965	47

SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:

- r Revised figures.
- .. Figures not available.
- ... Figures not appropriate or not applicable.
 - Nil or zero.

INTRODUCTION

This report presents the results of the Annual Electric Power Survey of Capability and Load which was conducted in March 1965. The survey covers all producers of electric energy in Canada which generate 10 million kwh. or more per annum. This report, therefore, covers the same group of firms which provide the statistics for the monthly "Electric Power Statistics" report (catalogue No. 57-001). The report is organized in such a manner that there is a direct comparison and link with the monthly "Electric Power Statistics" in that the generation figures are common to the two publications: Any differences are due to late revisions.

There are approximately 150 responding firms in the group, about half of which are utilities and half industrial establishments. The combined group accounts for 99.5 per cent of all generation, and all the imports and exports. The utilities group contributes approximately 80 per cent of the generation to the Canada total.

The survey is carried out in co-operation with the Canadian Electrical Association. Area representatives of the Association collect and edit the returns, which are forwarded to the Dominion Bureau of Statistics for final revision, editing, and compilation. The assistance received from the Canadian Electrical Association and its members has been invaluable.

Review of Survey Results

Total net generating capability in 1964 for firms which generate over 10 million kwh. per year increased 547,000 kw or 2.15 per cent to 26,025,000 kw. The forecast years 1965-69 indicate an anticipated growth of 11,543,000 kw. or a compound growth rate of 7.62 per cent as compared with the 1954-1964 growth rate of 6.92 per cent. Thermal capability is expected to grow at the rate of 12.7 per cent in the forecast period compared with 14.2 per cent in the previous ten year period, while hydroelectric capability is expected to increase at 5.9 per cent compared with 5.5 per cent in the previous ten years. The reversal of downward trend in hydro-electric capability which has been evident in the past few years is due to the large power projects which are now under construction in relatively remote areas and which will be put into service in the forecast years. The hydro-electric capability forecast figures do not include the Hamilton Falls development in Labrador. Ninety-four per cent of the thermal capability growth will be in conventional steam plants.

The first nuclear capability is forecast for 1967. The nuclear capability does not include the 20,000 kw. plant at Rolphton, Ontario, which is an experimental plant and therfore is no longer considered part of the capability. However, energy generated in this plant has been fed into the system and is included in Table 1.

In 1963 it was forecast that the net generating capability in 1964 would be 26,759,000 kw. or 734,000 kw higher than that actually obtained. This indicates that the completion of some plants has been delayed until 1965. The 1964 capability was significantly below the 1963 forecast in Ontario, Manitoba, Alberta and British Columbia.

The largest absolute growths in generating capability for the five forecast years are indicated for Quebec - 3,683,000 kw; Ontario, 3,517,000 kw; British Columbia 1,752,000 kw, and Alberta 822,000 kw. Eighty-five per cent of the increased generating capability in Quebec will be hydro capability. Ontario plans to increase its capability by adding 398,000 kw hydro and 3,119,000 kw in thermal capability, including 200,000 kw nuclear. British Columbia is forecasting an increase of 1,374,000 kw in hydro capability and 378,000 kw in thermal capability while Alberta estimates increases of 340,000 kw and 482,000 kw in hydro and thermal capability respectively.

In the period from 1954 to 1964 the growth rate of firm power peak load in Canada was 7.08 per cent. This growth rate is expected to drop slightly to 6.92 per cent during the forecast years 1964 to 1969. During the forecast period the indicated reserve is expected to increase from 3,379,000 kw in 1964 to 5,959,000 kw in 1969. The indicated reserve, stated as a percentage of firm power peak load, amounted to 14.9 per cent in 1964 and is forecast to reach 18.9 per cent in 1969.

Indicated reserve data does not take into account reduction in generating capability due to adverse flow conditions such as ice, low water, etc., which occur during the peak load season. In 1964, this reduction in generating capability amounted to about 690,000 kw with Quebec accounting for 68.9 per cent, Ontario 28.0 per cent, Newfoundland 1.8 per cent and British Columbia 1.3 per cent.

Firm energy requirements increased 10.3 per cent from 117,254 million kwh. in 1963 to 129,362 million kwh. in 1964 compared with a growth of 6.8 per cent in the previous ten year period and a forecast growth rate of 6.6 per cent for the period 1964-1969. The additional firm energy requirement was supplied by an increase in net generation of 12,632 million kwh. Net exports increased by 508 million kwh in 1964 and secondary energy delivered within Canada rose by 16 million kwh.

Concepts and Definitions

Table 1. Capability, Firm Power Peak Load and Energy Requirements:

The generating capability and firm power peak load concepts are virtually unchanged from previous reports. Generating capability measures the expected power of all available generating facilities of the province (or nation) at the time of one-hour firm peak load for each of the respondents. This may differ from the generating capacity as measured by the name plate rating of the equipment and published in the "Prime Mover and Electric Generating Equipment" report.

The variations between generating capability and generating capacity may be caused by high water in reservoirs resulting in a higher water head and greater generation than the name plate capacity the impossibility of placing all pieces of equipment on the line at the same time, low water, ice, or some equipment being considered unreliable, thereby resulting in generation below capacity.

All figures in Table 1 of the report are calculated at the time of the one-hour peak load for each of the respondents. As a result, capability and peak loads are non-coincident (the arithmetic sum of the actual peak loads regardless of time of occurrence) and may be equal to, or greater than, the coincident peak load for each of the provinces. Insofar as the utilities have about 80 per cent of the load of the nation and most of the peak loads occur in December, the variation from the coincident peak will not be too great. Two major systems which account for almost 40 per cent of the capability have only a slight variation between their coincident and non-coincident peak loads. Of thirty major systems serving Canada, nine had peak loads on December 21, eight on other dates between November 30 and December 31 and thirteen outside this period.

Receipts and deliveries of firm power used in calculating net capability are the interprovincial and international transfers of power under firm contracts, or the best estimate of firm obligations possible in the absence of contracts. The actual receipts and deliveries of firm and secondary power are taken into account in the calculation of firm power peak loads.

Peak loads are the total demands within a province after all inter-changes have been taken into account to remove any duplication. The peak loads include all electricity consumed by ultimate customers, line losses, and manufacturing plants own consumption, but do not include generating station service which is deducted before arriving at generating capability. Firm power peak loads exclude the secondary or surplus energy used by ultimate customers on an interruptible basis, as these are not firm obligations.

<u>Indicated shortages</u> (line 15, Table 1) are a measure of the firm power commitments that a system was not able to meet at the time of its peak load.

The indicated power reserve of a province (shown in Table 1) is the reserve after all firm obligations and shortages have been met or received. It is the difference between net capability and total firm peak load within the province or gross capability less firm power peak load on the province, and is a measure of the industries' ability to satisfy demands of a province and meet contingencies.

Since not all systems are fully interconnected, the reserves of power shown cannot always be fully utilized.

Net generation figures which are identical with the figures presented in the monthly "Electric Power Statistics" report (or revisions thereof) are exclusive of station service and, for 1964, are subdivided by type of generation. No forecasts of generation are given for 1965-69.

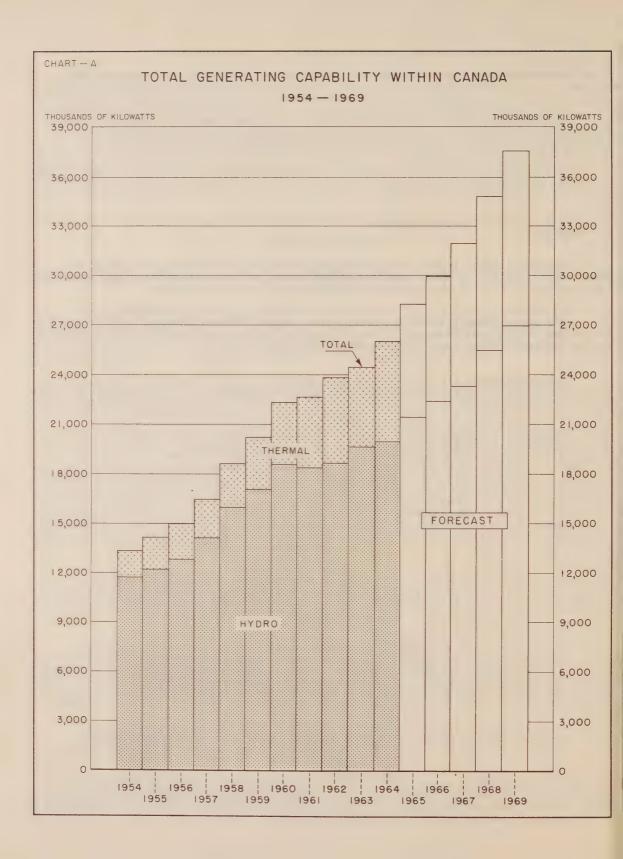
Although complete historical figures are not currently available, it is expected that they will be included in future reports.

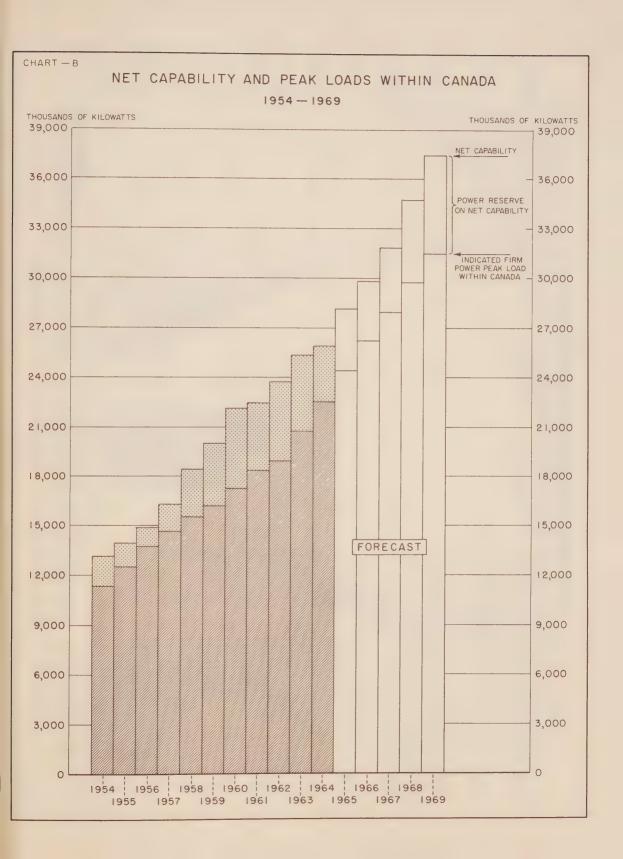
Secondary energy delivered within the province is the surplus energy sold at time of low demand and when surplus generating capability is available. This energy may be interrupted at any time and, consequently, sells at very low rates, generally for use in electric boilers.

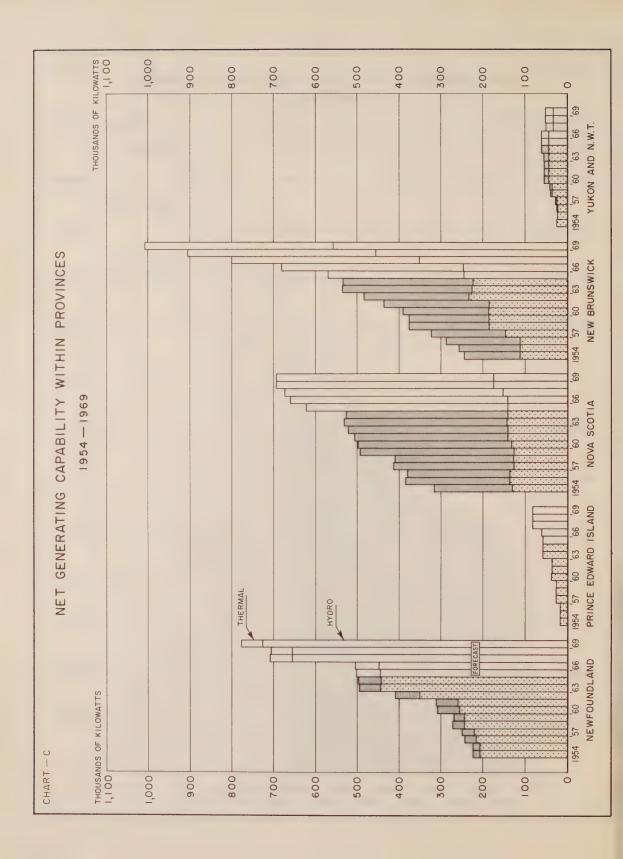
<u>Firm energy available</u> is the measure of primary demands of electric energy, including residential, commercial and power sales, and all line losses after deducting net exports. It is an important economic indicator and, as such, is of major importance in forecasting.

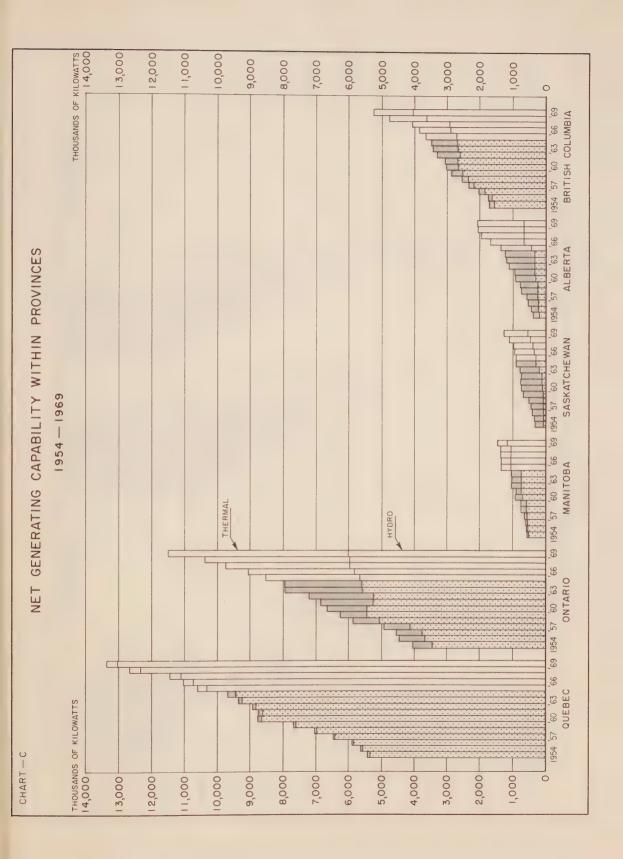
<u>Indicated shortage</u> (line 38, Table 1) is an estimate of the total quantity of energy a system was unable to deliver due to its inability to meet firm power commitments during the year; no shortages have occurred since 1957.

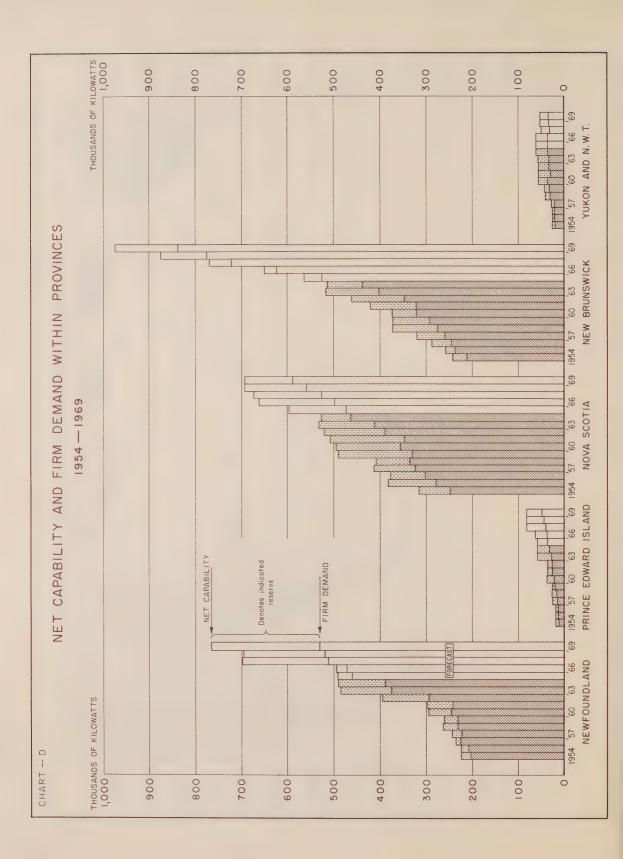
Firm energy requirements are a measure of the needs for electric energy that have been or can be met (firm energy available) and those that cannot be serviced (shortage).

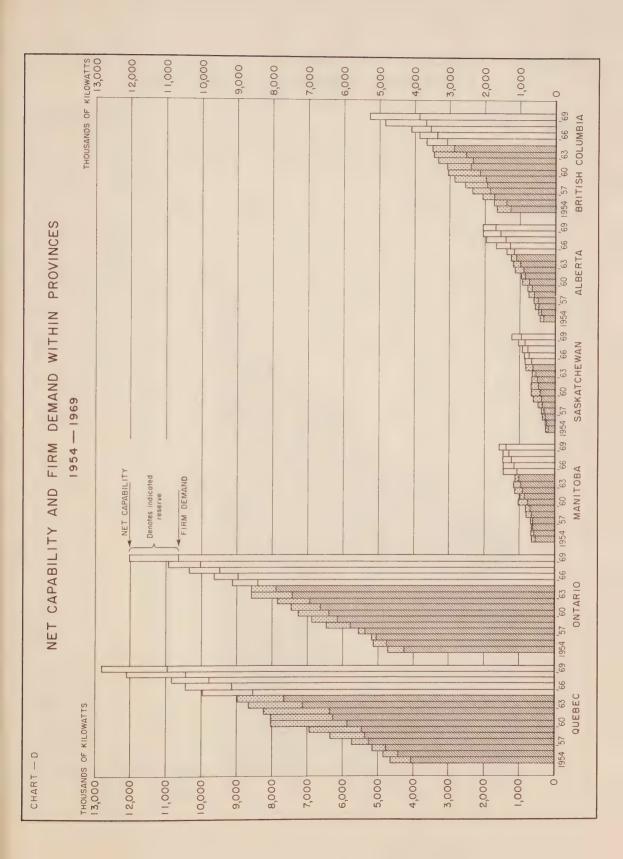


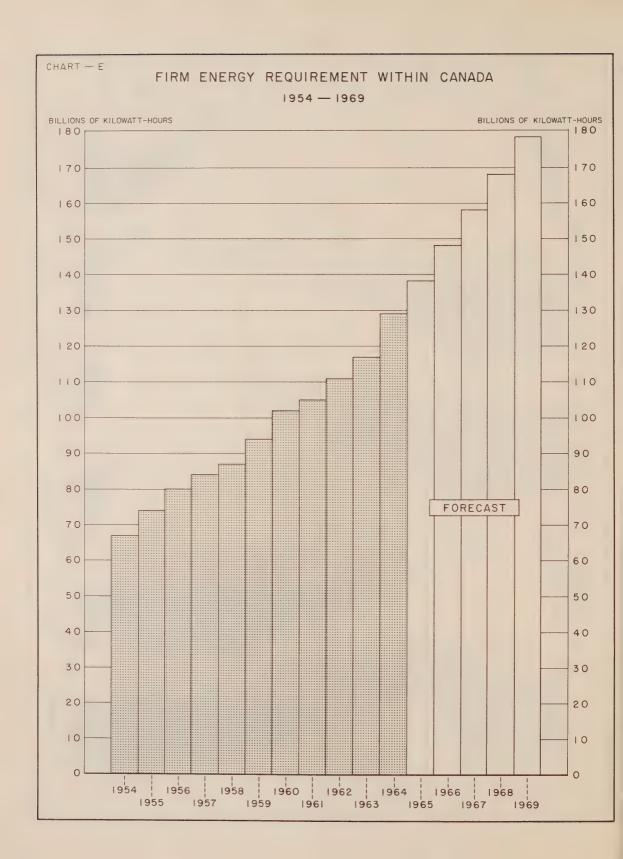












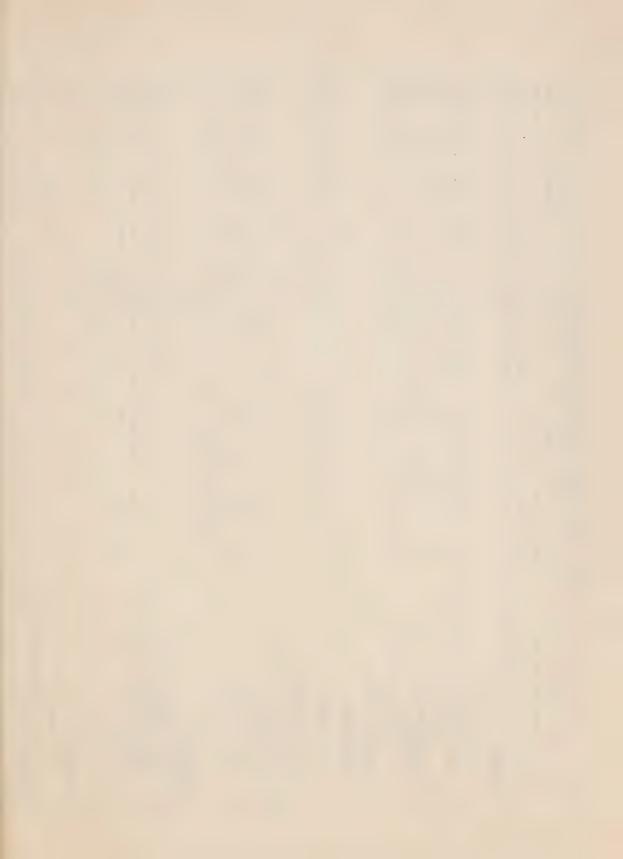


TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Canada

	Capability and peak load			Actual						Forecast		
		1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
	Capability:					thousands	of	kilowatts 				
	Net generating capability:											
75.	Hydro-electric Steam - Conventional)	11,719	18,516	18,389 (3,773 ^r	18,651 4,596	19,666 5,194	19,964 5,422	21,293	22,259 6,976	22,886	25,058	26,551 10,096
. 4	Internal combustion) Gas turbine)	1,609	3,824	240 (240 (351	251	236	255	260 384	268	271 441	275 442	279
	Total net generating capability	13,328	22,340	22,753 ^r	23,869	25,478	26,025	28,285	29,944	31,944	34,844	37,568
	Receipts of firm power from:											
7.8	Other provinces	7	: '		7	2		2				
.0	Total receipts	7	•	2	7	2	2	2	2	2	2	2
	Deliveries of firm power to:											
10.	Other provinces	176	166	146	121	122	129	92	76	96	100	104
12.	Total deliveries	176	166	146	121	122	129	92	96	96	100	104
13.	Total net capability (6 + 9 - 12)	13,156	22,174	22,609 ^r	23,752	25,358	25,898	28,195	29,852	31,850	34,746	37,466
H	Peak loads:											
14.	Firm power peak load within provinceIndicated shortages	11,355	17,264	18,353	18,972	20,757	22,506	24,392	26,176	27,926	29,681	31,440 67
16.	Total indicated firm power peak load within province (14 + 15)	11,359	17,264	18,353	18,972	20,785	22,519	24,422	26,221	27,979	29,740	31,507
17.	Firm power peak load on province (12 + 16)	11,535	17,430	18,499	19,093	20,907	22,648	24,514	26,315	28,075	29,840	31,611
	Indicated reserve:											
18.	Indicated reserve (13 - 16)	1,797	4,910	4,256 ^r	4,780	4,573	3,379	3,773	3,631	3,871	900,5	5,959
18a	Reduction in generating capability due to adverse conditions	:	:	:	:	779	687	:	i	:	i	:

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Canada

	Energy											
	70	1954	1960	1961	1962	1963	1964	1965	1966	1961	1968	1969
						millions o	of kilowatt-hours	t-hours				
N 19.	Net generation by: Hvdro-electric	:	105.770	103.692	103,695	103,539	113.212					
	Atasm - Contrast Cons.			8 823	19 5/3	17 111	10000					
21.			8 271	770 0	14,543	17,111	141	: :	::	::	: :	: :
22.	Internal combustion) Gas turbine	:	1/760	509	514 257	593	588	::	::	:::	::	::
24.	Total net generation	:	114,041	113,271	117,031	121,642	134,274	•	•	•	:	:
p2	Receipts of energy from:											
25.	(a) Firm: Other provinces United States	::	::	• 00 • •			. 9	. 5	. 2		: 8	
27.	(b) Secondary: Other provinces United States	::	::	1,392	2,764	2,867	2,971	: :	::	::	::	::
29.	Total receipts of energy	:	367	1,400	2,786	2,879	2,977	:	:	:	:	:
Д	Deliveries of energy to:											
30. 31.	(a) Firm: Other provinces United States	1,357	1,283	1,122	817	. 85 . 50	1,024	829	714	703	713	700
32.	(b) Secondary: Other provinces United States	::	4,228	3,058	3,267	2,754	3,194	::	::	::	::	::
34°	Total deliveries of energy	:	5,511	4,180	4,084	3,612	4,218	:	:	:	:	:
35°	Total energy available (24 + 29 - 34)	:	108,897	110,491	115,733	120,909	133,033	•	•			:
36. 8	36. Secondary energy delivered within Canada	:	6,615	5,415	4,690	3,655	3,671	:	:	:	:	:
37. 1	37. Firm energy available within Canada (35 - 36)	67,317	102,282	105,076	111,043	117,254	129,362	138,282	148,380	158,061	167,626	177,626
38. 1	38. Indicated shortage	11	1	1	3	1	•	•	1	•	1	'
39. 1	39. Firm energy requirement within Canada (37 + 38)	67,328	102,282	105,076	111,043	117,254	129,362	138,282	148,380	158,061	158,061 167,626	177,626
40. 1	40. Firm energy requirement on Canada (30 + 31 + 39)	68,685	103 565	106 198	111 860T	110 110	120 286	130 111	1/0 00/1	150 757	000	300 001

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Newfoundland

	Constitute and neek tood			Actual	181					Forecast		
	מספא דודה למדודרה מספה במפת	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
						thousa	thousands of kilowatts	owatts				
	Capability:											
	Net generating capability:											
1.	Hydro-electric	207	255	258	350	444	442	445	447	654	654	724
er.	Nuclear)	16	54		ı	•	1			ı		ı
4.	Internal combustion) Gas turbine			(13	14 -	L 1	11 .	11 .	11 -	61	10	10
. 9	Total net generating capability	223	309	311	604	967	498	501	503	708	704	774
	Receipts of firm power from:										,	
. %	Other provinces	1 1	1.1	4 1			1 1			1 1	, ,	1 1
.6	Total receipts	ŧ	1	1			1	,	1	,	1	
	Deliveries of firm power to:											
10.	Other provinces		14	13	13	10	60 1	6 -	6 1	6 -	6 -	6 -
12.	Total deliveries		14	13	13	10	80	. 6	6	6	6	6
13.	Total net capability (6 + 9 - 12)	223	295	298	396	486	067	492	767	669	695	765
	Peak loads:											
14. 15.	Firm power peak load within province Indicated shortages	201	245	242	294	349	376	094	472	512	519	531
16.	Total indicated firm power peak load within province (14 + 15)	202	245	242	294	37.7	389	097	472	512	519	531
17.	Firm power peak load on province (12 + 16)	202	259	255	307	387	397	694	187	521	528	540
	Indicated reserve:											
18.	Indicated reserve (13 - 16)	21	20	56	102	109	101	32	22	187	176	234
18a	Reduction in generating capability due to adverse conditions	:	:	:	:	14	12	:	:	÷	:	:

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Newfoundland

				Act	Actual					Forecast		
	Ver 89	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
						millions	millions of kilowatt-hours	tt-hours				
	Net generation by:											
19.	Hydro-electric	:	1,403	1,322	1,556	1,930	2,278	•	:	:	:	:
20.	Steam - Conventional)			(116	101	96	86	:	:	:	:	:
21.			76		4	•	1	:	:	:	:	:
22.	Internal combustion) Gas turbine)	:	0	01 -	6	οΌ I	12	::	: :	: :	: :	: :
24.	Total net generation		1,479	1,448	1,666	2,034	2,388	:	:	:	:	:
	Receipts of energy from:											
25.	(a) Firm: Other provinces United States	::	::		()	1 1	1 1	h 1	1 1	1 4	1 1	
27.	(b) Secondary: Other provinces United States	::	::	• •	ŧ ŧ	4 1	1 (: :	::	::	::	::
29.	Total receipts of energy	:	:	1	1	ı		:	:	:	:	:
	Deliveries of energy to:											
30.	(a) Firm: Other provinces United States	4 1	64	80	T *	36	54	55	55	55	55	55
32.	(b) Secondary: Other provinces United States	: :	36	en ۱	F 1	37	30	0 0 0 0	::	::	::	::
34.	Total deliveries of energy		85	83	81	73	84	•	:	:	:	:
35.	Total energy available (24 + 29 - 34)	:	1,394	1,365	1,585	1,961	2,304	:	:	:	:	•
36.	36. Secondary energy delivered within province	:	74	4	112	83	11	:	:	:	:	:
37.	37. Firm energy available within province (35 - 36)	1,225	1,320	1,361	1,473	1,878	2,293	2,678	2,719	3,049	3,086	3,152
38°	38. Indicated shortage	6	ı	ı	ı	1	1	1	•		,	•
39.	39. Firm energy requirement within province (37 + 38)	1,234	1,320	1,361	1,473	1,878	2,293	2,678	2,719	3,049	3,086	3,152
40.	$40.\ Flrm$ energy requirement on province (30 + 31 + 39)	1,234	1,369	1,441	1,554	1,914	2,347	2,733	2,774	3,104	3,141	3,207

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Prince Edward Island

1846 1846		Capability and peak load			Actual	1					Forecast		
Stability: Sta			1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Particle Capability: Particle Capability:		anability:					thousand	ls of kild	owatts				
System = Conventional)	1	Net generating capability:											
Receipts of firm power from:	3.5.	Hydro-electric Steam - Conventional)	1		(32	32	51	51	51	51	71	71	. 17
Total tate generating capability 18 38 37 37 58 58 59 61 61 61 61 61 61 61 6	4.	bustion)	18	38	S -	5 1	7 -	7 -	7	10	10	10	10
Deliveries of firm power from: Other provinces Cartering States Cartering States	. 9		18	38	37	37	58	58	58	61	81	81	81
United States Total receipts Total receipts Total receipts Total receipts Total receipts Total deliveries of firm power peak load within province (12 + 12) 18 38 37 37 58 58 61 81 81 81 82 82 83 84 84 84 84 84 84 84	7.	Receipts of firm power from: Other provinces		,		1	1	,	8	,	1	1	1
Deliveries of firm power to: Other provinces Corbit provinces Corbit provinces Corbit provinces Corbit provinces Core Corpit province Corp	. 6	United States			, ,		1	, ,		1	1		1
Other provinces 1													
Total deliveries Total deliveries Total net capability (6 + 9 - 12) 18 38 37 37 37 58 58 61 81 81 Rak Loads: Firm power peak load within province (12 + 16)	1.	Other provinces	1 1	1 1	1 1		1 1			, 1	1 1		1 1
Peak Loads: Firm power peak load within province (12 + 15) 18 38 37 37 37 58 58 61 81 81 81 Firm power peak load within province (12 + 15) 11 21 24 25 27 31 34 36 40 43 Firm power peak load on province (12 + 16) 11 21 24 25 27 31 34 36 40 43 Firm power peak load on province (12 + 16) 11 21 24 25 27 31 34 36 40 43 Firm power peak load on province (12 + 16) 11 21 24 25 27 31 34 36 40 43 Indicated reserve: Indicated reserve (13 - 16) 7 17 13 12 31 27 24 25 41 38 Reduction in generating capability due to adverse conditions 7 17 13 12 31 27 24 25 41 38	2.	Total deliveries	ı	,	,			,	,	,		'	,
Peak loads: Firm power peak load within province. 11 21 24 25 27 31 34 36 40 43 Total indicated firm power peak load within 11 21 24 25 27 31 34 36 40 43 Firm power peak load on province (12 + 16) 11 21 24 25 27 31 34 36 40 43 Indicated reserve: Indicated reserve (13 - 16) Total in generating capability due to Adverse conditions	en en	(6 + 9 - 12)	18	38	37	37	58	58	58	61	81	81	81
Firm power peak load within province 11 21 24 25 27 31 34 36 40 43 Indicated shortages	144	eak loads:											
Total indicated firm power peak load within province (14 + 15)	14.	Firm power peak load within province	Π.	21	24	25	27	31	34	36	- 40	43	48
Firm power peak load on province (12 + 16) 11 21 24 25 27 31 34 36 40 43	16.	Total indicated firm power peak load within province (14 + 15)	11	21	24	25	27	31	34	36	40	43	48
Indicated reserve: Indicated reserve (13 - 16)	17.		11	21	24	25	27	31	34	36	07	43	48
Indicated reserve (13 - 16)	-4	indicated reserve:											
Adverse conditions		e (13 = 16)	7	17	13	12	31	27	24	25	41	38	33
	5	Accuration in Semestring capacitary are as adverse conditions	:	:	:	:	,	'	:	:	:	:	:

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Capability, Firm Power Peak Load, and Energy Requirements - Concluded	Forecast	1964 1965 1966 1967 1968	millions of kilowatt-hours					124		1.1				1.1	: :	:	124	:	124 139 155 173 193	1 1	124 139 155 173 193	124 139 155 173 193
Energy Require		1963	millions			102	6	1111		\$ E	1 1	•		1 1	t a	•	111	1	111	1	111	111
id, and E	Actual	1962			1	93	00	101		1 1					1 1		101	1	101	1	101	101
er Peak Los	Ac	1961				(81	-	88			r 1	1		1 1	1 1		88	r	80	4	80	80
Firm Pow		1960			ı		42	42		::	: :	:		1 1	ŧ (1	79	,	62	1	42	79
ability,		1954			:		:	:		::	: :	:		1 1	1 1	ı	:	ŧ	94	1	94	94
Prince Edward Island TABLE 1. Capa	F. Carrent	19 4500		ž	ly. Hydro-electric	20. Steam - Conventional) 21. Nuclear)	22. Internal combustion)		Receipts of energy from:	(a) Firm: 25. Other provinces	(b) Secondary: 27. Other provinces	29. Total receipts of energy	Deliveries of energy to:	(a) Firm: 30. Other provinces	(b) Secondary: 32. Other provinces	34. Total deliveries of energy	35. Total energy available (24 + 29 = 34)	36. Secondary energy delivered within province	37. Firm energy available within province (35 - 36)	38. Indicated shortage	39. Firm energy requirement within province $(37 + 38)$	40. Firm energy requirement on province (30 + 31 + 39)

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Nova Scotia

	Son base with the son C			Actual	81					Forecast		
	המקמחווונץ מות הפתר וחמת	1954	1960	1961	1962	1963	1964	1965	1966	1961	1968	1969
	Capability:					thousa	thousands of ki	kilowatts				
	Net generating capability:											
1.25 €	Hydro-electric	130	132	141 (365	141 378	143	141	141 478	141 516	152 516	173	173
.4.	Internal Gas turb	188	367	~ ~ 1	. 2 .	. 21	i en i	. m :	. m.i	ו מו	. m.	. e. r
. 9	Total net generating capability	318	667	508	521	532	527	622	099	671	692	692
	Receipts of firm power from:											
7.8	Other provinces	- 1		- 1		1 1	1 1	1 1	1 1	1 1	1 1	1 1
6	Total receipts	1	1	ı	ı	ı	1	ī	ı	1		1
	Deliveries of firm power to:											
10.	Other provinces	2 -	e ۱	1 1	1 -	٦.	-1	25	1 1	1 (1 1	1 1
12.	Total deliveries	2	e e	-	1	1	1	25	1	ı	,	1
13.	Total net capability (6 + 9 - 12)	316	967	507	520	531	526	597	099	671	692	692
	Peak Loads:											
14.	Firm power peak load within province	245	356	347	388	411	462	473	667	526	558	588
16.	Total indicated firm power peak load within province (14 + 15)	248	356	347	388	411	797	473	667	526	558	588
17.	Firm power peak load on province (12 + 16)	250	359	348	389	412	463	498	667	526	558	588
	Indicated reserve:											
18.	In	89	140	160	132	120	799	124	191	145	134	104
	adverse conditions	:	:	:	:	-	1	:	:	:	:	:

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Nova Scotia

				AC	Actual					Forecast		
	V8 +2110 + 8.7	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
	Net generation by:					million	ns of kilo	millions of kilowatt-hours				
19.	Hydro-electric	:	632	549	710	799	718	:	*	*	:	e 6
20.	Steam - Conventional) Nuclear)			(1,301	1,300	1,313	1,662	::	::	::	::	::
22.	Internal combustion)	:	1,162		1 1	4 1	+ 1	::	: :	::	: :	: :
24.	Total net generation	:	1,794	1,850	2,010	2,112	2,380	:	:	:	:	:
	. Receipts of energy from:											
25.	(a) Firm: Other provinces United States	::	::	16	1 1		1 (1 1	1 1	1 1	1 1
27.	(b) Secondary: Other provinces United States	: :	: :	1 1		57	43			* *		: :
29.	Total receipts of energy	:	:	16	19	57	43	2° 4° 8	:	:	:	:
	Deliveries of energy to:											
30.	(a) Firm: Other provinces United States	7	80 -	12	r +	∞ ₁	2	186	1 1	f 1	1 1	r 1
32.	(b) Secondary: Other provinces United States	1 1	1 1	79	101	09	113	: :	: :	: :	: :	; :
34.	Total deliveries of energy	:	80	91	108	68	120	•	:	:	:	:
35.	Total energy available $(24 + 29 = 34)$:	1,714	1,775	1,969	2,101	2,303	0 0	:	:	:	:
36.	36. Secondary energy delivered within province	:	1	1	7	н	7	:	:	:	:	:
37.	37. Firm energy available within province (35 - 36) ,,	1,253	1,714	1,775	1,965	2,100	2,301	2,430	2,597	2,758	2,927	3,115
38	38. Indicated shortage	1	1	1	1	i	1	1	1	1	1	1
39.	39. Firm energy requirement within province (37 + 38)	1,253	1,714	1,775	1,965	2,100	2,301	2,430	2,597	2,758	2,927	3,115
40.	40. Firm energy requirement on province $(30 + 31 + 39)$	1,260	1,794	1,787	1,972	2,108	2,308	2,616	2,597	2,758	2,927	3,115

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

New Brunswick

	Gapability and beak load			Act	Actual					Forecast		
		1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
						thous	thousands of ki	kilowatts				
	Capability:											
	Net generating capability:											
125	Hydro-electric	112	186	185	233 240	224 304	305	244	245	350	456	558
. 4. %	Internal combustion) Gas turbine)	132	202	∞ ı	7	7	7	~ 1	· - 1	- 1		
9	Total net generating capability	244	388	436	480	535	534	568	619	800	906	1,008
	Receipts of firm power from:											
. %	Other provinces	2	-	9 1	5	2 2	0 0	33	5	6 7	10	11 2
	Total receipts	2	7	9	∞	7	11	35	11	11	12	13
	Deliveries of firm power to:											
10.	Other provinces	. 2	23	22	28	28	31	38	39	40	43	2 46
12.	Total deliveries	.∨	23	22	28	28	33	04	41	42	45	48
13.	Total net capability (6 + 9 - 12)	241	372	420	760	514	512	563	649	692	873	973
	Peak loads: Firm power peak load within province	210	319	319	74.5	401	257	523	621	720	773	ος Γ
15.	4 :	1	•	1			1		1			3
16.	Total indicated firm power peak load within province (14 + 15)	210	319	319	347	401	437	523	621	720	773	835
17.	Firm power peak load on province (12 + 16)	215	342	341	375	429	470	563	662	762	818	883
	Indicated reserve:											
18. 18a.	Indicated reserve (13 - 16) Reduction in generating capability due to adverse conditions	31	53	101	113	113	75	40	28	67	100	138

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Net generation by: 19. Hydro-electric 20. Steam - Conventional) 21. Internal combustion) 22. Gas turbine 23. Gas turbine 24. Total net generation 25. United States 26. United States 27. Other provinces 28. Total receipts of energy to: 29. Total receipts of energy 30. Other provinces 31. Other provinces 32. Other provinces 34. Total deliveries of energy 35. Total deliveries of energy 36. Secondary: 37. Total deliveries of energy 38. Total deliveries of energy 39. Total deliveries of energy 31. Other provinces 32. Other provinces 33. Total deliveries of energy 34. Total deliveries of energy available (24 + 29) 35. Total energy available within province 36. Secondary energy delivered within province 37. Firm energy available within province (35 -	Libergy									rorecast		
Net generation by: 19. Hydro-electric 20. Steam - Convention 21. Internal combustic 22. Gas turbine 24. Total net genera 25. Other province 26. United States 27. (b) Secondary: 28. United States 29. Total receipt 20. Other province 31. (b) Secondary: 32. Other province 34. Total delive 35. Total delive 36. Secondary energy delivation energy delivation energy delivation energy delivation energy delivation energy available		1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Net generation by: 19. Hydro-electric 20. Steam - Convention 21. Internal combustio 22. Gas turbine 24. Total net genera 25. United States 27. United States 28. Total receipt 29. Total receipt 29. Total receipt 30. Other province United States 29. Total receipt 31. Other province United States 32. Other province United States 34. Total delive 35. Total delive 36. Secondary energy delivation elements 37. Firm energy available						million	millions of kilowatt-hours	watt-hours				
19. Hydro-electric 20. Steam - Convention 21. Internal combustion 23. Gas turbine 24. Total net genera 26. United States 27. Other province 28. United States 29. Total receip 29. Total receip 30. Other province 31. United States 32. Other province 34. Total delive 35. Total delive 36. Secondary energy deliva 37. Firm energy available												
20. Steam - Convention 21. Internal combustion 23. Gas turbine 24. Total net genera 25. United States 26. United States 27. Other province 28. United States 29. Total receip 29. Total receip 30. Other province 31. United States 32. Other province 33. United States 34. Total delive 35. Total delive 36. Secondary energy delives 37. Firm energy available		:	887	766	1,191	1,272	1,019	:	÷	÷	:	:
22. Internal combustion 23. Gas turbine 24. Total net genera 25. Other province 26. United States 27. Other province 28. United States 30. Other province 31. Other province 31. Other province 32. United States 34. Total delive 35. Total delive 36. Secondary energy deliva 37. Firm energy available	nal)			078)	895	1,019	1,525	: :	: :	: :	: :	: :
Receipts of energy fro (a) Firm: Other province 26. (b) Secondary: Other province 28. (b) Secondary: Other province 30. (a) Firm: Other province 31. (b) Secondary: Other province 32. Other province 33. Other province 34. Total delive 35. Total energy available		:	842	18	- 2	ru r	4 -	: :	::	::	::	::
Receipts of energy from (a) Firm: 25. Other province 26. United States 27. Cher province 28. United States 29. Total receip to Firm: 30. (a) Firm: United States 31. (b) Secondary: Other province 31. United States 34. Total delivers 35. Total energy deliving 35. Total energy deliving 37. Firm energy available	ation	:	1,729	1,882	2,088	2,296	2,548	:	:	÷	:	÷
25. Other province 26. United States 27. Other province 28. United States 29. Total receip 29. Total receip 30. (a) Firm: 30. United States 31. (b) Secondary: 32. Other province 33. United States 34. Total delive 35. Total energy delivation of the secondary energy available	mo:											
27. (b) Secondary: 28. United States 29. Total receip 30. (a) Firm: 30. Other province 31. (b) Secondary: 32. Other province 33. United States 34. Total delive 35. Total eneily 36. Secondary energy delivative energy and the energy		::	::	31	28	29	32	213	29	31	34	37
Deliveries of energy t (a) Firm: 30. (b) Secondary: 31. (c) Secondary: 32. (d) Other province 33. (d) Other province 34. (e) Total delive 35. (f) Total energy delives 37. Firm energy available		: :	: :	79	101	90	113		: :	: :	::	: :
Deliveries of energy to (a) Firm: 30. Other province 31. (b) Secondary: 32. Other province 33. United States 34. Total delive 35. Total energy delives 35. Total energy energy delives 37. Firm energy available	pts of energy	:	111	124	146	103	151	:	:	:	:	:
30. Other province 31. United States 32. (b) Secondary: Other province 33. United States 34. Total delive 35. Total ener 36. Secondary energy deliving 37. Firm energy available	ţo:											
32. Other province 33. United States 34. Total delive 35. Total energy action and 36. Secondary energy delivation 37. Firm energy available		- 29	58	125	166	178	163	1 235	130	130	1130	1 130
34. Total delive 35. Total ener 36. Secondary energy delity 37. Firm energy available		: :	107	16	67	57 68	43	: :		: :	::	: :
35. Total ener 36. Secondary energy delin 37. Firm energy available	Total deliveries of energy	:	165	219	317	303	289	:	:	:	:	:
36. Secondary energy delia	Total energy available (24 + 29 - 34)	:	1,675	1,787	1,917	2,096	2,410	•	:	:	:	:
37. Firm energy available	vered within province	:	1	5	20	٦	1	:	:	:	:	:
	37. Firm energy available within province (35 - 36)	1,199	1,674	1,782	1,912	2,095	2,410	2,921	3,415	3,895	4,165	4,464
38. Indicated shortage		1	1	1	1	ı	1	ŧ	•	1	•	t
39. Firm energy requirement	39. Firm energy requirement within province $(37 + 38)$	1,199	1,674	1,782	1,912	2,095	2,410	2,921	3,415	3,895	4,165	4,464
40. Firm energy requirement on	int on province (30 + 31 + 39)	1,258	1,732	1,907	2,078	2,273	2,574	3,157	3,546	4,026	4,296	4,595

				Actual	ual					Forecast		
	Capability and peak load	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
	Capability:					thousands	of	kilowatts				
,	Net generating capability:											
3.5.	Hydro-electric	5,378	8,658	8,628	8,830	9,271	9,453	10,196	10,594	10,668	11,900	12,593
5.	Internal combustion) Gas turbine		1	(15	36	36	36	36	72	15 72	15 72	15 72
٠.	Total net generating capability	5,413	8,764	8,738	8,919	9,376	9,696	10,606	11,052	11,454	12,686	13,379
	Receipts of firm power from:											
7.	Other provinces	1 4	16	19	15	12	18	19	19	20	20	21
9.	Total receipts	5	16	21	17	12	18	19	19	20	20	21
	Deliveries of firm power to:											
10.	Other provinces	719	698	696	697	703	717	635	636	636	594	595
12.	Total deliveries	775	755	734	701	709	717	635	636	636	594	595
13.	Total net capability (6 + 9 - 12)	4,643	8,025	8,025	8,235	8,679	8,997	066,6	10,435	10,838	12,112	12,805
P4	Peak loads:											
14.	Firm power peak load within province	4,092	5,871	6,258	6,370	7,118	7,654	8,517	9,139	9,791	10,406	10,967
16.	Total indicated firm power peak load within province (14 + 15)	4,092	5,871	6,258	6,370	7,118	7,654	8,517	9,139	9,791	10,406	10,967
17.	Firm power peak load on province (12 + 16)	4,867	6,626	6,992	7,071	7,827	8,371	9,152	9,775	10,427	11,000	11,562
H	Indicated reserve:											
18.	Indicated reserve (13 - 16)	551	2,154	1,767	1,865	1,561	1,343	1,473	1,296	1,047	1,706	1,838
	adverse conditions	:	:	:	:	435	474	:	÷	:	:	:

				Act	Actual					Forecast		
	Energy	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
						million	millions of kilowatt-hours	att-hours				
Net ge	Net generation by:											
19. Hydr	Hydro-electric	:	50,000	49,432	662,64	49,454	56,268	:	:	:	:	:
20. Steam	Steam - Conventional)			276	288	320	424	: :	: :	: :	: :	::
	Internal combiner on)	:	273 (7	13	77	9		:	:	:	:
23. Gas	Internal compusation / Gas turbine)			11	29	-	1			:	:	:
24. To	Total net generation	:	50,273	49,726	50,129	49,819	56,699		:	:	:	:
Receip	Receipts of energy from:											
(a) 25. 26.	(a) Firm: Other provinces	::	::	87	110	4,	83	83	82	86	89	91
(b) 27. (b) 28.	(b) Secondary: Other provinces United States	::	::	16	1 1	66	45	::	::	::	::	: :
29.	Total receipts of energy	:	103	110	117	143	129	:	:	:	:	:
Delive	Deliveries of energy to:											
(a) 30. 31.	(a) Firm: Other provinces United States	4,331	4,193	4,207	3,964	3,975	4,371	4,386	4,016	4,018	3,839	3,834
32. (b)	(b) Secondary: Other provinces United States	::	1,723	1,649	1,963	1,004	2,648	::	: :	::	::	::
34.	Total deliveries of energy	:	6,474	6,263	6,235	5,246	7,066	:	:	:	:	:
35.	Total energy available (24 + 29 - 34)	:	43,902	43,573	44,011	44,716	49,762		:	:	:	:
36. Secon	36. Secondary energy delivered within province	:	5,350	4,551	3,622	2,613	2,672	:	:	:	:	:
37. Firm	37. Firm energy available Within province (35 - 36)	27,954	38,552	39,022	40,389	42,103	47,090	49,704	52,724	56,203	59,637	63,357
38. Indic	38. Indicated shortage	1		1	1	ı	ı	ı	t	1	1	1
39. Firm	39. Firm energy requirement within province (37 + 38)	27,955	38,552	39,022	40,389	42,103	47,090	40,704	52,724	56,203	59,637	63,357
40. Firm	60 Rithm energy requirement on province (30 + 31 + 39)	377 05	170 07	000	170	100 01	077 12	27, 007	074 75	000 07	207 67	006 23

				Actual	a1					Forecast		
	Capability and peak load	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
	Gapability:					thousands of		kilowatts				
	Net generating capability:											
3.	Hydro-electric	3,481	5,464	5,292	5,285	5,601 2,376	5,603	5,666	5,802 3,264	5,986 3,579 200	5,986 4,209 200 11	6,001 5,295 200 11
. 9	Total net generating capability	4,088	6,650	6,858	7,223	7,989	7,990	8,553	9,075	9,776	10,406	11,507
_		CC	709	207	607	009	000	107		100	100	i i
. %	United States	/32	694	669	269	669	607	627	627	627	584	584
. 6	Total receipts	732	769	695	692	669	709	627	627	627	584	584
	Deliveries of firm power to:											
10.	Other provinces	85	86	86	2 89	88	886	54	55	9 26	57	10
12.	Total deliveries	86	888	91	91	06	106	62	63	65	99	89
13.	Total net capability (6 + 9 - 12)	4,734	7,256	7,462	7,824	8,598	8,593	9,118	6,639	10,338	10,924	12,023
Pi	Peak loads:											
14.	Firm power peak load within province	4,261	6,391	6,615	6,913	7,412	7,897	8,399	8,959	9,471	10,035	10,657
16.	Total indicated firm power peak load within province (14 + 15)	4,261	6,391	6,615	6,913	7,412	7,897	8,399	8,959	9,471	10,035	10,657
17.	Firm power peak load on province (12 + 16)	4,347	6,479	902.9	7,004	7,502	8,003	8,461	9,022	9,536	10,101	10,725
H	Indicated reserve:											
18. 18a	Indicated reserve (13 - 16)	473	865	847	911	1,186	969	719	089	867	889	1,366
	adverse conditions	:	:	:	:	321	192	:	÷	÷	÷	:

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Ontario

	5			Actual	al				(Ety	Forecast		
	Energy	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
	Net ceneration by:				D	millions of	of kilowatt-hours	-hours				
19.	Hydro-electric	:	34,870	33,654	30,872	29,099	30,150	:	:	:	÷	:
20.	Steam - Conventional) Nuclear		6	(1,187	4,335	8,291	9,313	::	::	::	::	::
22.	Internal combustion)	:	822	31	29	24	22	::	::	::	::	::
24.	Total net generation	:	35,692	34,872	35,259	37,501	39,626	:	:	:	:	
	Receipts of energy from:											
25.	(a) Firm: Other provinces United States	::	::	4,186°	3,943	3,954	4,346	4,359	3,987	3,987	3,805	3,797
27.	(b) Secondary: Other provinces United States	: :	: :	1,651r 1,362	2,009	1,008	2,680	: :	::	::;	::	::
29.	Total receipts of energy	:	6,182	7,199	8,656	7,808	9,933	:	:	:	:	:
	Deliveries of energy to:											
30.	(a) Firm: Other provinces United States	3 624	727	7	635	8	28 852	27 585	29	30	33	35 558
32.	(b) Secondary: Other provinces United States	::	131	2,909	221	257	3,042	::	::	: :	::	::
34.	Total deliveries of energy	:	4,907	3,833	3,738	3,343	4,177	:	:	:	:	:
35.	Total energy available (24 + 29 - 34)	:	36,967	38,238	40,177	41,966	45,382	:	:	:	:	:
36.	36. Secondary energy delivered within province	:	585	511	546	437	568	:	:	:	:	:
37.	37. Firm energy available within province (35 - 36)	23,928	36,382	37,727	39,631	41,529	44,814	47,742	51,161	54,044	57,462	60,790
38.	38. Indicated shortage	1	ı	ı	1	1	ı	ŧ	ı	1	1	1
39°	39. Firm energy requirement within province (37 + 38)	23,929	36,382	37,727	39,631	41,529	44,814	47,742	51,161	54,044	57,462	062,09
40.	40. Firm energy requirement on province $(30 + 31 + 39)$	24,556	37,115	38,376	40,273	42,209	45,694	48,354	51,764	54,637	58,066	61,383

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Manitoba

				Actual	ual					Forecast		
	capability and peak load	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
	Capability:					thousands of		kilowatts				
	Net generating capability:											
1. 3.	Hydro-electric	522	701	735 (291 ^F (-	735 291	735 291	735 291	1,061	1,061 291	1,061 291	1,061	1,171 291
4.	Internal combustion) Gas turbine)	40	231	4 1	7	7	οο ₁	оо ı	оо I	61	61	11
. 9	Total net generating capability	568	932	1,030r	1,033	1,033	1,034	1,360	1,360	1,361	1,361	1,473
	Receipts of firm power from:											
7.	Other provinces	80	86	83	87	134	76	85	85	85	80.	85
.6	Total receipts	80	86	83	87	134	76	85	85	85	85	85
	Deliveries of firm power to:											
10.	Other provinces	13	1 1	, ,	1 1	, ,	1 1	()	1 1	1 1		
12.	Total deliveries	13		1		1	,	1	1	1	,	,
13	Total net capability (6 + 9 - 12)	635	1,018	1,113 ^r	1,120	1,167	1,128	1,445	1,445	1,446	1,446	1,558
	Peak loads:											
14.	Firm power peak load within province Indicated shortages	533	772	849	907	955	1,004	1,078	1,142	1,215	1,293	1,370
16.	Total indicated firm power peak load within province (14 + 15)	533	772	849	907	955	1,004	1,078	1,142	1,215	1,293	1,370
17.	Firm power peak load on province (12 + 16)	246	772	849	907	955	1,004	1,078	1,142	1,215	1,293	1,370
,	Indicated reserve:											
18. 18a	Indicated reserve (13 - 16)Reduction in generating capability due to	102	246	264r	213	212	124	367	303	231	153	188
	adverse conditions	:	:	:	:	1		:	:	:	:	:

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Manitoba

	Rnorov			Act	Actual				Fo	Forecast		
	[0]	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
	Net generation by:					millions of kilowatt-hours	f kilowatt	hours				
19.	Hydro-electric	:	3,735	3,591	4,220	4,736	4,799	:	:	:	:	:
20.	Steam -			(238	120	61	148	:	*	:	÷	:
22.	Nuclear))	:	75	' II'	12	1 2	7 28	• • •	• • • • • • • • • • • • • • • • • • •	• • •	: ::	
24.	Total net generation	:	3,810	3,840	4,352	4,810	4,975	0 0	:		:	:
	Receipts of energy from:											
25.	(a) Firm: Other provinces United States	• •	::	623	249	687	651	650	059	650	059	650
27.	(b) Secondary; Other provinces United States	::	: :	301	199	198	249	• •	o o o		: :	
29.	Total receipts of energy	:	739	924	978	885	006	*	9 0 0	:	:	:
	Deliveries of energy to:											
30.	(a) Firm: Other provinces United States	114		H _i I	54 ₍₋₁₎		1 1	1 1	1.1	1 1	1 4	t t
32.	(b) Secondary: Other provinces United States	::	4 1	ـ و بر	75 ^r	65	49	•		• •		
34.	Total deliveries of energy		4	9	75	65	67	•	•	:	:	:
35.	Total energy available (24 + 29 - 34)	:	4,545	4,758	5,123	5,630	5,826	:		0 0	•	:
36.	36. Secondary energy delivered within province	:	344	09	120	185	153	*	8 0 0	:	:	* *
37.	37. Firm energy available within province (35 - 36)	2,886	4,201	4,698	5,003	5,445	5,673	6,023	6,347	6,731	7,068	7,440
38.	38. Indicated shortage	•	1	t	1	4	1	ě	1	,	6	
39.	39. Firm energy requirement within province (37 + 38)	2,886	4,201	4,698	5,003	5,445	5,673	6,023	6,347	6,731	7,068	7,440
40.	$40.\ Firm$ energy requirement on province (30 + 31 + 39)	3,000	4,201	4,698 ^r	5,003 ^r	5,445	5,673	6,023	6,347	6,731	7,068	7,440
1												

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Saskatchewan

	Capability and beak load			Actual	al					Forecast		
		1954	1960	1961	1962	1963	1961	1965	1966	1967	1968	1969
	Capability:					thouse	thousands of kilowatts	lowatts				
	Net generating capability:											
1. 2. 3.	Hydro-electric Steam - Conventional)	85	66	107 (572 (107 575	208	309	309	352 529	392 529	498 529	551 670
.5.	Internal combustion) Gas turbine)	243	653	(35	37	36	35	35	35	35	35	35
. 9	Total net generating capability	328	752	757	752	775	912	912	955	966	1,101	1,295
	Receipts of firm power from:											
7.8	Other provinces	1 1	ет	1 4		1 1			1 1		1 1	1 1
.6	Total receipts		1	,	,	1	í	•	ŧ		,	,
	Deliveries of firm power to:											
10.	Other provinces	80	98	80 1	87	134	96	88 .	85	85	85	85
12.	Total deliveries	80	86	88	87	134	76	8 5	85	85	85	85
13.	Total net capability (6 + 9 - 12)	248	299	699	665	641	818	827	870	910	1,016	1,210
	Peak loads:											
14.	Firm power peak load within province Indicated shortages	196	418	995	497	531	619	699	729	752	861	936
16.	Total indicated firm power peak load within province (14 + 15)	196	418	997	497	531	619	699	729	752	861	936
17.	Firm power peak load on province (12 + 16)	276	504	554	584	665	713	754	814	837	946	1,021
	Indicated reserve:											
189	Indicated reserve (13 - 16)	52	249	203	168	110	199	158	141	158	155	274
		:	:	:	:	7	'	:	:	:	:	:

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Saskatchewan

	Pane			Act	Actual					Forecast		
	79 - 211	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
						millions	millions of kilowatt-hours	tt-hours				
	Net generation by:											
19.	Hydro-electric	:	620	658	704	985	1,369	:	:	:	:	÷
20.	Steam - Conventional)			(1,682	1,844	1,833	1,782	: ;	: :	: :	: :	: :
22.	Nuclear)	:	1,659	100	97	106	106	• • • • • •	: :	: :	: :	: :
23.	Gas turbine			(62	37	647	99	•			:	:
24.	Total net generation	:	2,279	2,511	2,682	2,973	3,321	:	:	:	:	:
	Danalate of saston from											
	Necetytes of energy from.											
25.	(a) Firm: Other provinces United States	::	::	1 1	H ₁ t	t 1	1 1	1 1	1 1	1 1	4 1	
27.	(b) Se	:	:	v	29 ^r	62	17	•	:	:	:	:
28.		:	:	•	•	1	1		:	:	:	
29.	Total receipts of energy	:	9	9	29	62	17	:	:	:	:	:
	Deliveries of energy to:											
30.	(a) Firm: Other provinces United States	558	575	621	647	687	651	650	059	059	650	- 059
32.	(b) Secondary: Other provinces United States	::	44	41		4 1	6 -	: :	::	::		::
34.	Total deliveries of energy	:	619	662	647	691	099	0 0	:	:	:	:
35.	Total energy available $(24 + 29 - 34)$:	1,666	1,855	2,064	2,344	2,678	:	:	:	:	:
46	26 Connections assessed at this nevertage		4	'	'	17	20		:	:	:	:
0 1	(35 - 36)	77.0	1 666	2,77	2 064	2 327	2 658	2 939	3.266	3, 542	3,859	4.207
./5	3/. firm energy available within province (35 - 30)	74/	7,000	1,000	10067	40.64	0000					
38.	38. Indicated shortage	1	•		•	•	1	•	1	ı		1
39.	39. Firm energy requirement within province (37 + 38)	742	1,666	1,855	2,064	2,327	2,658	2,939	3,266	3,542	3,859	4,207
40	40. Firm energy requirement on province (30 + 31 + 39)	1,300	2,241	2,476	2,711	3,014	3,309	3,589	3,916	4,192	4,509	4,857

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Alberta

				Actual	ual					Forecast		
	Capability and peak load	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
												6064
	Capability:					thousar	thousands of kilowatts	owatts				
	Net generating capability:											
25.	Hydro-electric Steam - Conventional)	202	318	327 (498	327	326 713	326 748	476	666	1,107	666	666
. 44	Internal combustion) Gas turbine)	194	607	28 (100	33	31 130	31	33	34	34	35 152	36 152
9	Total net generating capability	396	925	953	1,133	1,200	1,235	1.387	1,673	1,958	2,056	2,057
	Receipts of firm power from:											
٠°.	Other provinces	7 1	en 1	1 (1 1		1 1		1 6	, ,		1 1
9.	Total receipts	7	6			1	1	,	1	,	,	
	Deliveries of firm power to:											
10.	Other provinces United States	1 1	e 1	rU +	4 1	10	12	13	15	18	25	25
12.	Total deliveries	,	1	5	47	10	12	13	15	18	25	25
13.	Total net capability (6 + 9 - 12)	400	927	948	1,129	1,190	1,223	1,374	1,658	1,940	2,031	2,032
	Peak loads:											
14.	Firm power peak load within province Indicated shortages	313	714	836	882	984	1,106	1,160	1,274	1,399	1,532	1,696
16.	Total indicated firm power peak load within province (14 + 15)	313	714	836	882	984	1,106	1,160	1,274	1,399	1,532	1,696
17.	Firm power peak load on province (12 + 16)	313	715	841	886	966	1,118	1,173	1,289	1,417	1,557	1,721
	Indicated reserve:											
18. 18a	Indicated reserve (13 - 16)Reduction in generating capability due to	87	213	112	247	206	117	214	384	541	667	336
	adverse conditions	:	:	:	:	,	'	:	:	:	:	:

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Alberta

1954 1960 1961 1962 1963 1964 1965 1966 1967 1968		p			Actual	ua1					Forecast		
Steam - Convention by: Steam - Convention by: Steam - Convention by: Steam - Convention by: National continued Steam - Convention		Duergy	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Steam - Convencion Dy: Steam - Convencion							millions	of kilows	att-hours				
Steam - Conventional Nuclear N		Net generation by: Hydro-electric	:	887	1,023	926	881	968	:	:	:	:	:
Total analyce of energy from: (a) Figure Colors provinces Colors province	20.	Steam - Conventional) Nuclear)			(2,534	2,900	3,294	3,770	::	::	::	::	: :
Secondary: Color province Color pr	22.) abustion)	:	2,540	(51 (165	59	60 257	900	: :	: :	: :	0 0	
(a) First provinces (b) Secondary: (b) Secondary energy available within province (35 - 34) (c) First provinces (d) First provinces (e) First provinces (f) Secondary: (g) Secondary: (g) Secondary energy delivered within province (35 - 34) (g) First provinces (g) Secondary energy delivered within province (35 - 34) (g) Secondary energy delivered within province (35 - 34) (g) Secondary energy delivered within province (35 - 34) (g) Secondary energy delivered within province (35 - 34) (g) Secondary energy delivered within province (35 - 34) (g) Secondary energy delivered within province (35 - 34) (g) Secondary energy delivered within province (35 - 34) (g) Secondary energy delivered within province (35 - 34) (g) Secondary energy delivered within province (35 - 34) (g) Secondary energy delivered within province (35 - 34) (g) Secondary energy delivered within province (35 - 34) (g) Secondary energy delivered within province (35 - 34) (g) Secondary energy delivered within province (35 - 34) (g) Secondary energy delivered within province (35 - 34) (g) Secondary energy requirement within province (30 - 31) (g) Secondary energy requirement on province (30 - 31) (g) Secondary energy requirement on province (30 - 31) (g) Secondary energy requirement within province (30 - 31) (g) Secondary energy energy delivered secondary energy requirement within province (30 - 34) (g) Secondary energy energy delivered secondary energy ener	24.	Total net generation	:	3,427	3,773	4,102	4,492	4,965		:		•	•
(a) Sacondary: (b) Sacondary energy delivered within province (35 - 36) 1,581 2,582 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 Pullead States Secondary energy delivered within province (35 - 36) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 Pirm energy requirement within province (37 - 36) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 Pirm energy requirement within province (37 - 36) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 Pirm energy requirement within province (37 - 36) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 Pirm energy requirement within province (37 - 36) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 Pirm energy requirement within province (37 - 36) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 Pirm energy requirement within province (37 - 36) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 Pirm energy requirement on province (37 - 38) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 Pirm energy requirement on province (30 - 31 + 39) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 Pirm energy requirement on province (30 - 31 + 39) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 Pirm energy requirement on province (30 - 31 + 39) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 Pirm energy requirement within province (30 - 36) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 Pirm energy requirement within province (30 - 36) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 Pirm energy requirement within province (30 - 36) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 Pirm energy requirement within province (30 - 36) 1,581 3,452 3,808 4,121 4,591 6,987 7,128 3,980 6,067 6,585 7,128 3,980 6,067 6,585 7,128 3,980 6,067 6,585 7,128 3,980 6,067 6,585 7,128 3,980 6,067 6,585 7,128 3,980 6,067 6,585 7,128 3,980 6,067 6,585 7,128 3,980 6,067 6,585 7,128 3,980 6,067 6,585 7,128 3,9		Receipts of energy from:											
(b) Secondary:	25.	er provinces	* *	::	1	23	4 1	eri 1	gred 1	H 1	ж 1	H 1	н 1
Total receipts of energy to: (a) Pitm:	27.	vinces			30		23	21	• •	::		* *	
(a) First Other provinces United States United States (b) Secondary: United States (c) Secondary: United States (d) Secondary: United States (e) Secondary: United States (f) Secondary: (e) Secondary: United States (f) Secondary: (e) Secondary: United States (f) Secondary: (e) Secondary: (f)	29.	•		30	36	23	27	22	:	:	:	:	
(b) Secondary: Other provinces Other provinces Other provinces Other provinces Other provinces Other province (35 - 34) Secondary energy delivered within province (35 - 36) Firm energy requirement within province (37 + 38) Firm energy requirement within province (37 + 38) Firm energy requirement within province (37 + 38) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39)		Deliveries of energy to:											
(b) Secondary: Other provinces United States Total deliveries of energy Total energy available (24 + 29 - 34) Total energy available within province (35 - 36) Firm energy available within province (37 - 36) Firm energy requirement within province (37 + 38) Firm energy requirement within province (37 + 38) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39) Firm energy requirement on province (30 + 31 + 39)	30.	(a) Firm: Other provinces United States	1 (en 1	н.	4 .	1-1	1.1	1 1		1 1	1.1	1 1
Secondary energy available (24 + 29 - 34) 3,452 3,808 4,121 4,519 4,987	32.	(b) Secondary: Other provinces United States	::	2	1 1	5 1	4 1	1 1		• •			: :
Secondary energy available (24 + 29 - 34) 3,452 3,808 4,121 4,519 4,987	34.	Total deliveries of	:	5	1	77	•	1		0 0 0	•	:	
36) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128	35.	Total energy available (24 + 29 -	:	3,452	3,808	4,121	4,519	4,987	•	:		•	•
36) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128	36.	Secondary energy delivered within province	:	8	1	1	1	,	:	÷	:	:	:
7 + 38) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 31 + 39) 1,581 3,455 3,809 4,125 4,519 4,987 5,535 6,067 6,585 7,128	37.		1,581	3,452	3,808	4,121	4,519	4,987	5,535	6,067	6,585	7,128	7,759
7 + 38) 1,581 3,452 3,808 4,121 4,519 4,987 5,535 6,067 6,585 7,128 31 + 39) 1,581 3,455 3,809 4,125 4,519 4,987 5,535 6,067 6,585 7,128	38.	Indicated shortage	1	1	1		1	1	1	•	ŧ	1	1
31 + 39) 1,581 3,455 3,809 4,125 4,519 4,987 5,535 6,067 6,585 7,128	39.	Firm energy requirement within province (37 + 38)	1,581	3,452	3,808	4,121	4,519	4,987	5,535	6,067	6,585	7,128	7,759
	40.	31		3,455	3,809	4,125	4,519	4,987	5,535	6,067	6,585	7,128	7,759

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

British Columbia

	Capability and peak load			Actual	ıaı					Forecast		
		1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
	Capability:					thousar	thousands of kilowatts	owatts				
	Net generating capability:											
1.	Hydro-electric	1,578	2,659	2,672	2,599	2,670	2,689	2,693	2,889	2,906	3,613	4,063
5.	Internal Gas turb	130	369	((109 (172	112	106	117	120	123	124	125	126 177
9	Total net generating capability	1,708	3,028	3,070	3,307	3,428	3,481	3,640	3,848	4,072	4,782	5,233
	Receipts of firm power from:											
. 8	Other provinces	1 1	1 1	20 1	7 -	10	12	13	15	18	25	25
9.	Total receipts	0	a	-5	4	10	12	13	15	18	25	25
	Deliveries of firm power to:											
10.	Other provinces	30	m I	1 1	1 1	1 1	1.1			r - 1	1 1	
12.	Total deliveries	34	က	•	1	5	ŧ	1	,	1	1	,
13.	Total net capability (6 + 9 - 12)	1,674	3,025	3,075	3,311	3,438	3,493	3,653	3,863	4,090	4,807	5,258
,	Peak loads:											
14.	Firm power peak load within province	1,275	2,123	2,368	2,317	2,537	2,886	3,037	3,263	3,459	3,617	3,765
16.	Total indicated firm power peak load within province (14 + 15)	1,275	2,123	2,368	2,317	2,537	2,886	3,067	3,308	3,512	3,676	3,832
17.	Firm power peak load on province (12 + 16)	1,309	2,126	2,368	2,317	2,537	2,886	3,067	3,308	3,512	3,676	3,832
	Indicated reserve:											
18. 18a	In	399	902	707	766	901	607	586	555	578	1,131	1,426
	adverse conditions	:	:	:	:	2	6	:		:	:	:

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

British Columbia

Energy	ı	1954	1960	1961	1962	1963	1964	1965	1966	1961	1968	1969
Net generation by:						million	millions of kilowatt-hours	att-hours				
19. Hydro-electric		:	12,584	12,295	13,500	14,194	15,516	•	•	*	:	•
20. Steam - Conventional) 21. Nuclear)				535	999	780	1,207	::	• •	• •	0 0 0 0 0 0	::
22. Internal combustion)	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	•	729	246 246 10	261	300	293	::	::	* *	• •	0 0 0 0
24. Total net generation		:	13,313	13,086	14,429	15,279	17,020		:	:	:	:
Receipts of energy from:	å											
(a) Firm: 25. Other provinces	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	å d • 0	* *	, , , , ,	4 =	1 1	1.62	1 11	1 11	• •	1 1	1 11
(b) Secondary: 07. Other provinces	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		* *	I 90 pri	57	19	- 61	: :	::	::	* *	
29. Total receipts of energy .		:	72	18	62	19	63		:	:	:	:
Deliveries of energy to:												
(a) Firm: 30. Other provinces	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10	60 62	9 64	23	4 7	211	1 2	7 7	2 1	3 1	⊣ €
(b) Secondary: 32. Other provinces	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	::	27	30	14	23	21 30	0 0	0 0 0 0 0	0 0 0 0	9 0 0 0 0 0	* * * * *
34. Total deliveries of energy		:	00 4	55	39	87	54	:	:		:	
35. Total energy available (24	(24 + 29 - 34)	•	13,337	13,049	14,452	15,250	17,029	•	:	•	:	:
36. Secondary energy delivered within province	rovince	•	233	242	230	268	180	0	0	•	:	:
37. Firm energy available within provinc	province (35 - 36)	6,414	13,104	12,807	14,222	14,982	16,849	17,998	19,727	20,891	21,902	22,924
38. Indicated shortage		t	1	1	1	1	t	1	ı	ı	ŧ	1
39. Firm energy requirement within province (37 + 38)	ince (37 + 38)	6,414	13,104	12,807	14,222	14,982	16,849	17,998	19,727	20,891	21,902	22,924
40. Firm energy requirement on province	(30 + 31 + 39)	808	12 100	6 6 7	170 74	47.000	16 050	18 001	10 730	20 80%	21 006	22 028

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements

Yukon and Northwest Territories

	1969			51	15	69		1		1 1	,	69		47	47	47		22	÷
	1968			51	15	69				()	,	69		777	777	7,7		25	÷
Forecast	1967			51	14	89	, ,			1 1	-	89		41	41	41		27	÷
	1966			62	13	78	1 (1		1 (t	78		42	42	42		36	:
	1965	watts		62	13	78				, ,	,	78		42	42	42		36	:
	1964	thousands of kilowatts		77	13	09		ŧ		4-1	,	09		34	34	34		26	
	1963	thousan		444	11	56	, ,	,		1 1	1	56		32	32	32		24	
11	1962			444	10	55	1 3	,			t	55		32	32	32		23	:
Actual	1961			4 ⁴	(10	55				()		55		29	29	29		26	:
	1960			5 7	11	55	1 1			1 1	ı	55		34	34	34		21	:
	1954			24		24	1 1	1		1 1	1	24		18	18	18		9	:
Canalki I free and month load		Capability:	Net generating capability:	Hydro-electric	Internal combustion) Gas turbine)	Total net generating capability	Receipts of firm power from: Other provinces United States	Total receipts	Deliveries of firm power to:	Other provinces	Total deliveries	Total net capability (6 + 9 - 12)	Peak loads:	Firm power peak load within province Indicated shortages	Total indicated firm power peak load within province (14 + 15)	Firm power peak load on province (12 + 16)	Indicated reserve:	In Re	
				1. 2.	4.	9	7. 8.	.6		10.	12.	13.		14.	16.	17.		18. 18a	

TABLE 1. Capability, Firm Power Peak Load, and Energy Requirements - Concluded

Yukon and Northwest Territories

				Actual	ıaı					Forecast		
	Energy	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
						millions	millions of kilowatt-hours	att-hours				4
4	Net generation by:											
19.	Hydro-electric		152	174	187	189	199	0 0	•	:	:	:
20.	Steam - Conventional)			2 /	2	7	en 1	•	:	:	0 1	
21.	Nuclear	:	14	, ,	1 6	ı ç			•	•		
22.	Internal combustion) Gas turbine)			(19	24	24	77					
24.	Total net generation	:	166	195	213	215	228		•		:	:
	Receipts of energy from:											
25.	(a) Firm: Other provinces United States	::	::	i i	1-1	1 1	1 1	::	::	::	::	::
27.	(b) Secondary: Other provinces United States	::	::	1 1	1 1	1 1	1 1	: :	• •	• •	• •	
29.	Total receipts of energy	:	:		\$,	1	•	:	:	:	:
	Deliveries of energy to:											
30.	(a) Firm: Other provinces United States	1 1	i t	1 1	1 1	1 1	1.1	s 1	t i	t (1 1	1 1
32.	(b) Secondary: Other provinces United States		1 1		1 1	1 1	1 1		::	::	::	::
34.	Total deliveries of energy	ě	t	,	ŧ	,	1	•	•	a o a	:	
35.	Total energy available (24 + 29 - 34)	:	166	195	213	215	228	:		*	•	
36.	36. Secondary energy delivered within province	:	28	42	51	20	65	:	*	:	:	:
37.	37. Firm energy available within province (35 - 36)	89	138	153	162	165	163	173	202	190	199	206
38°	Indicated shortage	1	ŧ	ı	ı	1	ı	ı	t	1	1	,
39.	39. Firm energy requirement within province (37 + 38)	89	138	153	162	165	163	173	202	190	199	206
40.	40. Firm energy requirement on province(30 + 31 + 39)	89	138	153	162	165	163	173	202	190	199	206

TABLE 2. Total Net Generating Capability within Provinces(1)

									Forecast			Percen (com	Percentage change (compounded)	nge
Province	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1954 1964	1960	1964
					thous	thousands of ki	kilowatts							
Newfoundland (including Labrador)	223	309	311	607	964	867	501	503	708	704	774	8.36	12.67	9.22
Prince Edward Island	18	38	37	37	58	58	58	9	81	81	81	12.41	11.15	6.91
Nova Scotia	318	667	508	521	532	527	622	099	671	692	692	5.18	1.37	5.60
New Brunswick	244	388	436	087	535	534	568	629	800	906	1,008	8,15	8.31	13.55
Quebec	5,413	8,764	8,738	8,919	9,376	9,696	10,606	11,052	11,454	12,686	13,379	00.9	2.56	6.63
Ontario	4,088	6,650	6,858	7,223	7,989	7,990	8,553	9,075	9,776	10,406	11,507	6.93	4.70	7.57
Manitoba	568	932	1,030 ^F	1,033	1,033	1,034	1,360	1,360	1,361	1,361	1,473	6.17	2.63	7.34
Saskatchewan	328	752	757	752	775	912	912	955	995	1,101	1,295	10.77	4.94	7.27
Alberta	396	925	953	1,133	1,200	1,235	1,387	1,673	1,958	2,056	2,057	12.05	7.49	10.74
British Columbia	1,708	3,028	3,070	3,307	3,428	3,481	3,640	3,848	4,072	4,782	5,233	7.38	3,55	8.50
Yukon and Northwest Territories	24	55	55	55	56	09	78	78	89	69	69	9,60	2.20	2.83
Canada	13,328	22,340	22,753 ^F	23,869	25,478	26,025	28,285	29,944	31,944	34,844	37,568	6.92	3.89	7.62

TABLE 3. Firm Power Peak Load within Provinces(1)

									Forecast			Percer (com	Percentage change (compounded)	nge
Province	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1954	1960 1964	1964 1969
					thousar	thousands of kilowatts	owatts							
Newfoundland (including Labrador)	201*	245	242	294	349	376	094	472	512	519	531	6.46	11.30	7.15
Prince Edward Island	11	21	24	25	27	31	34	36	40	43	84	10.92	10.23	9.14
Nova Scotia	245 ^r	356	347	388	411	462	473	664	526	558	588	6.55	6.73	4.94
New Brunswick	210	319	319	347	401	437	523	621	720	773	835	7.60	8.19	13.83
Quebec	4,092	5,871	6,258	6,370	7,118	7,654	8,517	9,139	9,791	10,406	10,967	6.44	6.86	7.46
Ontario	4 _s 261	6,391	6,615	6,913	7,412	7,897	8,399	8,959	9,471	10,035	10,657	6.37	5.43	6,18
Manitoba	533	772	849	907	955	1,004	1,078	1,142	1,215	1,293	1,370	6.54	62.99	6.41
Saskatchewan	196	418	466	497	531	619	699	729	752	861	936	12.19	10.31	8.62
Alberta	313	714	836	882	984	1,106	1,160	1,274	1,399	1,532	1,696	13.45	11.56	8.93
British Columbia	1,275	2,123	2,368	2,317	2,537	2,886	3,037	3,263	3,459	3,617	3,765	8.51	7.98	5.46
Yukon and Northwest Territories	18	34	29	32	32	34	42	45	41	44	47	6.57	00.00	69.9
Canada	11,355r	17,264	18,353	18,972	20,757	22,506	24,392	26,176	27,926	29,681	31,440	7.08	6.85	6.92
(1) Table 1, item 14.														

TABLE 4. Firm Energy Requirement within Provinces(1)

									Forecast			Percen (com	Percentage change (compounded)	nge
Province	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1954 1964	1960 1964	1964
					millions	jo	kilowatt-hours							
Newfoundland (including Labrador)	1,234	1,320	1,361	1,473	1,878	2,293	2,678	2,719	3,049	3,086	3,152	6.39	14.81	6.57
Prince Edward Island	94	79	80	101	111	124	139	155	173	193	212	10.43	11.93	11.32
Nova Scotia	1,253	1,714	1,775	1,965	2,100	2,301	2,430	2,597	2,758	2,927	3,115	6.27	7.64	6.25
New Brunswick	1,199	1,674	1,782	1,912	2,095	2,410	2,921	3,415	3,895	4,165	797"7	7.23	9.54	13.11
Onepec	27,955	38,552	39,022	40,389	42,103	47,090	49,704	52,724	56,203	59,637	63,357	5.35	5.13	6.11
Ontario	23,929	36,382	37,727	39,631	41,529	44,814	47,742	51, 161	54,044	57,462	062,099	6.48	5.35	6.29
Manitoba	2,886	4,201	4,698	5,003	5,445	5,673	6,023	6,347	6,731	7,068	7,440	7.09	7.80	5.57
Saskatchewan	742	1,666	1,855	2,064	2,327	2,658	2,939	3,266	3,542	3,859	4,207	13.61	12.39	9.62
Alberta	1,581	3,452	3,808	4,121	4,519	4,987	5,535	6,067	6,585	7,128	7,759	12.17	9.63	9.24
British Columbia	6,414	13,104	12,807	14,222	14,982	16,849	17,998	19,727	20,891	21,902	22,924	10.14	6**9	6.35
Yukon and Northwest Territories	89	138	153	162	165	163	173	202	190	199	206	6.24	4.25	4.80
Canada	67,328	102,282	105,076	111,043	117,254	129,362	138,282	148,380	158,061	167,626	177,626	6.75	6.05	6,55
(1) Table 1, item 39.														

TABLE 5. Indicated Reserve(1)

										Forecast			Perce (co	Percentage change (compounded)	nge
	Province	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1954 1964	1960	1964
						thousands	of	kilowatts							
N	Newfoundland (including Labrador):														
2:	Gross capability	223	309	311	409	387	397	501	503 481	708 521	704 528	774 540	8.36	12.67	9.22
ຕໍ່		21	50	56	102	109	101	32	22	187	176	234	:	:	:
	Indicated reserve expressed as a per cent of firm power peak load	10.4	19.3	22.0	33.2	28.2	25.4	8.9	9.4	35.9	33.3	43.3	:	:	:
<u>a</u>	Prince Edward Island:														
1.	Gross capability	118	38	37 24	37	58	58	58	61 36	81 40	81	81	12.41	11.15	6.91
en -	reserve (1 - 2)	7	17	13	12	31	27	24	25	41	38	33	:	:	•
4	Indicated reserve expressed as a per cent of firm power peak load	63.6	81.0	54.2	48.0	114.8	87.1	9.07	4.69	102.5	88.4	68.8	:	:	e e e
Z	Nova Scotia:														
1.	Gross capabilityFirm power peak load on province	318 250	499	508	521 389	532	527	622	099	671 526	692 558	692 588	5.18	1.37	5.60
m ·	reserve (1 - 2)	89	140	160	132	120	79	124	161	145	134	104	:	:	:
. 4	Indicated reserve expressed as a per cent of firm power peak load	27.2	39.0	0.94	33.9	29.1	13.8	24.9	32.3	27.6	24.0	17.7	:	:	:
Z	New Brunswick:														
1.	Gross capability	246	395	442	488	542 429	545	603 563	690	811 762	918	1,021	8.28	8.38	13.38
en .	Indicated reserve (1 - 2)	31	53	101	113	113	75	07	28	67	100	138	:	:	:
. 4	Indicated reserve expressed as a per cent of firm power peak load	14.4	15.5	29.6	30.1	26.3	16.0	7.1	4.2	6.4	12.2	15.6	:	:	:

(I) Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18).

TABLE 5. Indicated Reserve(1) - Continued

									Forecast	ast		Percen (com	Percentage change (compounded)	nge
Province	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1954 1964	1960 1964	1964
					thousands	Jo	kilowatts							
Quebec:														
1. Gross capability	5,418	8,780	8,759	8,936	9,388	9,714	10,625 9,152	11,071 9,775	11,474	12,706	13,400	6.01	2.56	6.65
	551	2,154	1,767	1,865	1,561	1,343	1,473	1,296	1,047	1,706	1,838	:	:	:
*. indicated reserve expressed as a per cent of firm power peak load	11.3	32.5	25.3	26.4	19.9	16.0	16.1	13,3	10.0	15.5	15.9	:	:	:
Ontario:														
1. Gross capability	4,820	7,344	7,553	7,915	8,688	8,699	9,180	9,702	10,403	10,990	12,091	6.08	4.33	6.03
	473	865	847	911	1,186	969	719	680	867	889	1,366	•	:	:
4. Indicated reserve expressed as a per cent of firm power peak load	10.9r	13.4	12.6	13.0	15.8	8.7	∞ 	7.5	9.1	80.00	12.7	:	:	:
Manitoba:														
1. Gross capability	648 546	1,018	1,113 ^r 849	1,120	1,167	1,128	1,445	1,445	1,446	1,446	1,558	5.70	2.60	6.67
	102	246	264 ^r	213	212	124	367	303	231	153	188	:	:	:
4. indicated reserve expressed as a per cent of firm power peak load	18.7	31.9	31.1 ^r	23.5	22.2	12.4	34.0	26.5	19.0	11.8	13.7	:	:	:
Saskatchewan:														
1. Gross capability	328 276	753 504	757 554	752	775	912	912	955	995	1,101	1,295	10.77	9.06	7.27
3. Indicated reserve (1 - 2)	52	249	203	168	110	199	158	141	158	155	274	:	:	÷
cent of firm power peak load	18.8r	4.64	36.6	28.8	16.5	27.9	21.0	17.3	18.9	16.4	26.8	:	:	:
(1) Gross capability (Table 1, items 6 + 9)	40	firm power peak load	load on	province	(Table	1, item	17); ind	icated re	serve (Ta	item 17); indicated reserve (Table 1, item 18)	em 18).			

TABLE 5. Indicated Reserve(1) - Concluded

										rorecast			1100)	(compounded)	
	Province	1954	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1954 1964	1960	1964 1969
						thousands	Jo	kilowatts							
A	Alberta:														
2.	Gross capability	400	928	953	1,133	1,200	1,235	1,387	1,673	1,958	2,056	2,057	11.93	7.41	10.74
ຕ	reserve (1 - 2)	87	213	112	247	206	117	214	384	541	667	336	:	÷	:
. 4	Indicated reserve expressed as a per cent of firm power peak load	27.8	29.8	13.3	27.9	20.7 ^r	10.5	18.2	29.8	38.2	32.0	19.5	÷	:	:
띠	British Columbia:														
1.	Gross capability	1,708	3,028	3,075	3,311	3,438	3,493	3,653	3,863	4,090	4,807	5,258	7.42	3.64	8.52
3.		399	902	707	966	901	607	586	555	578	1,131	1,426	:	:	:
4.	Indicated reserve expressed as a per cent of firm power peak load	30.5	42.4	29.9	42.9	35.5	21.0	19.1	16.8	16.5	30.8	37.2	÷	÷	:
,	Yukon and Northwest Territories:														
1.	Gross capability	24	34	29	32	32	94	78	78	177	777	69	9.60	0.00	2.83
'n	reserve (1 - 2)	9	21	26	23	24	26	36	36	27	25	22	:	÷	:
4.	Indicated reserve expressed as a per cent of firm power peak load	33.3	61.8	89.7 ^r	71.9	75.0	76.5	85.7	85.7	62.9	56.8	8.97	:	:	:
	Canada:														
1.	Gross capability	13,332	22,340	22,755 ^r 18,499	23,873	25,480 20,907	26,027 22,648	28,287	29,946	31,946	34,846	37,570	6.98	3.89	7.62
e,	Indicated reserve (1 - 2)	1,797	4,910	4,256 ^r	4,780	4,573	3,379	3,773	3,631	3,871	5,006	5,959	:	:	:
4.	Indicated reserve expressed as a per cent of firm power beak load	15.6	28.2	To cc	L C	1		- Li	13 8	0 0 0	8 91	0 81			:

(1) Gross capability (Table 1, items 6 + 9); firm power peak load on province (Table 1, item 17); indicated reserve (Table 1, item 18). The Revised figures.

GLOSSARY OF TERMS

Firm Energy Requirement

Energy required to meet firm obligations, or for use in own industrial plant other than in electric boilers.

Firm Power

Maximum power always to be available, short of major outages caused by storm, explosion, strikes, etc.

Firm Power Peak Load

The annual Firm Power maximum average net kilowatt load of one hour duration within the Utility, System or Industrial Establishment.

Firm Obligations

Shall include only maximum commitments under contract agreements to accept or deliver power on an irrevocable basis or the best estimate of firm obligations in the absence of contracts.

Indicated Demand

The sum of firm power peak load and indicated shortage.

Indicated Reserve

Net capability less indicated firm power peak load within the province or gross capability less firm power peak load on the province.

Industrial Establishment

A firm which generates power primarily for use in its own plants.

Net Generating Capability

The maximum net kilowatt output (after station service) available from the generating facilities of the Utility, System or Industrial Establishment with all equipment available, at the time of the annual Firm Power Peak Load, determined as the average kilowatt output for one hour with no allowance for outages of generating units.

Net Capability

The sum of net generating capability and purchases of firm power under firm obligation from other utilities less deliveries of firm power under firm obligation to other utilities.

System

Two or more Utilities, Industrial Establishments or a combination of these, having interconnections for the exchange of power, which although they may be separately incorporated, are controlled, managed or operated by one principal.

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